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     FILE 'HCAPLUS' ENTERED AT 16:13:08 ON 03 MAY 2010
L1          2602 S HYDROXYETHYLSTARCH OR (HYDROXYETHYL STARCH) OR (HYDROXYETHYL(
L2          6228 S (PLASMA EXPANDER) OR HYPOVOLEMIA OR (VOLUME REPLACEMENT) OR (
L3           158 S L1 AND L2
L4          1765 S (PLASMA EXPANDER) OR HYPOVOLEMIA OR (VOLUME REPLACEMENT) OR (
L5           143 S L1 AND L4

     FILE 'STNGUIDE' ENTERED AT 16:14:41 ON 03 MAY 2010

     FILE 'HCAPLUS' ENTERED AT 16:15:09 ON 03 MAY 2010
L6       1978171 S SUBSTITUTED OR RATIO
L7            23 S L5 AND L6
L8            17 S L7 AND (PY<2005 OR AY<2005 OR PRY<2005)
L9         81590 S MOLECULAR WEIGHT
L10       167589 S (MOLECULAR WEIGHT) OR MW
L11           17 S L3 AND L10
L12           15 S L11 NOT L8
L13        18142 S (HIGH MOLECULAR WEIGHT) OR HMW
L14           19 S L1 AND L13
L15           18 S L14 NOT (L8 OR L11)
L16           14 S L15 AND (PY<2005 OR AY<2005 OR PRY<2005)
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=> file hcaplus
COST IN U.S. DOLLARS                                    SINCE FILE      TOTAL
                                                           ENTRY    SESSION
FULL ESTIMATED COST                                         0.22       0.22

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FILE COVERS 1907 - 3 May 2010  VOL 152 ISS 19
FILE LAST UPDATED: 2 May 2010  (20100502/ED)
REVISED CLASS FIELDS (/NCL) LAST RELOADED:  Feb 2010
USPTO MANUAL OF CLASSIFICATIONS THESAURUS ISSUE DATE:  Feb 2010

HCAplus now includes complete International Patent Classification (IPC)
reclassification data for the first quarter of 2010.

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http://www.cas.org/legal/infopolicy.html

This file contains CAS Registry Numbers for easy and accurate
substance identification.

=> s hydroxyethylstarch or (hydroxyethyl starch) or (hydroxyethyl(W)(amylose or
amylopectin))
           317 HYDROXYETHYLSTARCH
        124415 HYDROXYETHYL
        201499 STARCH
          2337 HYDROXYETHYL STARCH
                 (HYDROXYETHYL(W)STARCH)
        124415 HYDROXYETHYL
         14800 AMYLOSE
          8024 AMYLOPECTIN
            28 HYDROXYETHYL(W)(AMYLOSE OR AMYLOPECTIN)
L1        2602 HYDROXYETHYLSTARCH OR (HYDROXYETHYL STARCH) OR (HYDROXYETHYL(W)(
               AMYLOSE OR AMYLOPECTIN))

=> s (plasma expander) or hypovolemia or (volume replacement) or (plasma
replacement) or (peritoneal dialysis)
       1060979 PLASMA
          3816 EXPANDER
           421 PLASMA EXPANDER
                 (PLASMA(W)EXPANDER)
          1248 HYPOVOLEMIA
        139386 VOLUME
        148168 REPLACEMENT
            56 VOLUME REPLACEMENT
                 (VOLUME(W)REPLACEMENT)
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       1060979 PLASMA
        148168 REPLACEMENT
            60 PLASMA REPLACEMENT
               (PLASMA(W)REPLACEMENT)
         37869 PERITONEAL
         65450 DIALYSIS
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               (PERITONEAL(W)DIALYSIS)
L2         6228 (PLASMA EXPANDER) OR HYPOVOLEMIA OR (VOLUME REPLACEMENT) OR (PLA
               SMA REPLACEMENT) OR (PERITONEAL DIALYSIS)

=> s l1 and l2
L3          158 L1 AND L2

=> s (plasma expander) or hypovolemia or (volume replacement) or (plasma
replacement)
       1060979 PLASMA
          3816 EXPANDER
           421 PLASMA EXPANDER
               (PLASMA(W)EXPANDER)
          1248 HYPOVOLEMIA
        139386 VOLUME
        148168 REPLACEMENT
            56 VOLUME REPLACEMENT
               (VOLUME(W)REPLACEMENT)
       1060979 PLASMA
        148168 REPLACEMENT
            60 PLASMA REPLACEMENT
               (PLASMA(W)REPLACEMENT)
L4         1765 (PLASMA EXPANDER) OR HYPOVOLEMIA OR (VOLUME REPLACEMENT) OR (PLA
               SMA REPLACEMENT)

=> s l1 and l4
L5          143 L1 AND L4

=> fiel stnguide
FIEL IS NOT A RECOGNIZED COMMAND
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=> file stnguide
COST IN U.S. DOLLARS                            SINCE FILE      TOTAL
                                                     ENTRY    SESSION
FULL ESTIMATED COST                                   8.73       8.95

FILE 'STNGUIDE' ENTERED AT 16:14:41 ON 03 MAY 2010
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FILE CONTAINS CURRENT INFORMATION.
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=> file hcaplus
COST IN U.S. DOLLARS                            SINCE FILE      TOTAL
                                                     ENTRY    SESSION
FULL ESTIMATED COST                                   0.07       9.02

FILE 'HCAPLUS' ENTERED AT 16:15:09 ON 03 MAY 2010
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
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FILE COVERS 1907 - 3 May 2010 VOL 152 ISS 19
FILE LAST UPDATED: 2 May 2010 (20100502/ED)
REVISED CLASS FIELDS (/NCL) LAST RELOADED: Feb 2010
USPTO MANUAL OF CLASSIFICATIONS THESAURUS ISSUE DATE: Feb 2010

HCAplus now includes complete International Patent Classification (IPC)
reclassification data for the first quarter of 2010.

This file contains CAS Registry Numbers for easy and accurate
substance identification.

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=> s substituted or ratio
        559978 SUBSTITUTED
       1438390 RATIO
L6     1978171 SUBSTITUTED OR RATIO

=> s l5 and l6
L7          23 L5 AND L6

=> s l7 and (PY<2005 or AY<2005 or PRY<2005)
      25158051 PY<2005
       5164796 AY<2005
       4643928 PRY<2005
L8          17 L7 AND (PY<2005 OR AY<2005 OR PRY<2005)

=> d l8 1-17 ti abs bib

L8   ANSWER 1 OF 17  HCAPLUS  COPYRIGHT 2010 ACS on STN
TI   Production and use of hydroxyethyl starch
AB   Hydroxyethyl starch (I) useful in pharmaceuticals and
     having weight-average mol. weight (Mn) ≥500,000, degree of substitution (DS)
     0.25-0.5, and C2/C6 ratio 2-<8 is prepared  Suspending 30 kg
     wax-cornstarch in 52.2 kg H2Oactivating at 85° with 5.1 g NaOH,
     adding 4.159 kf liquid ethylene oxide, heating slowly to 40°,
     stirring for 2 h, reducing Mn by heating with 20% HCl (giving pH 2.0) at
     75°, cooling to 50°, and ultrafiltration gave I with DS
     0.39, Mw 1520, and C2-C6 ratio 2.3.  Use of I as, i.a., a plasma
     volume expander is exemplified.
AN   2005:979667  HCAPLUS <<LOGINID::20100503>>
DN   143:250014
TI   Production and use of hydroxyethyl starch
IN   Boll, Michael; Fisch, Andreas; Spahn, Donat R.
PA   B. Braun Melsungen A.-G., Germany
SO   PCT Int. Appl., 39 pp.
```

CODEN: PIXXD2
DT Patent
LA German
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2005082942	A2	20050909	WO 2005-EP50877	20050301 <--
	WO 2005082942	A3	20060316		
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
	RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	AU 2005217157	A1	20050909	AU 2005-217157	20050301 <--
	EP 1732953	A2	20061220	EP 2005-708068	20050301 <--
	EP 1732953	B1	20071107		
	R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LI, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR				
	CN 1926155	A	20070307	CN 2005-80006765	20050301 <--
	BR 2005008285	A	20070807	BR 2005-8285	20050301 <--
	JP 2007525588	T	20070906	JP 2007-501278	20050301 <--
	AT 377609	T	20071115	AT 2005-708068	20050301 <--
	ZA 2006008126	A	20080227	ZA 2006-8126	20050301 <--
	ES 2294680	T3	20080401	ES 2005-708068	20050301 <--
	RU 2373222	C2	20091120	RU 2006-134639	20050301 <--
	IN 2006CN03159	A	20070608	IN 2006-CN3159	20060831 <--
	KR 2007022672	A	20070227	KR 2006-720430	20060929 <--
	US 20070282014	A1	20071206	US 2007-590462	20070730 <--
PRAI	EP 2004-100813	A	20040301 <--		
	WO 2005-EP50877	W	20050301		

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT
RE.CNT 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 2 OF 17 HCAPLUS COPYRIGHT 2010 ACS on STN
TI Equivalence of hydroxyethyl starch HES 130/0.4 and HES 200/0.5 for perioperative volume replacement in major gynecological surgery
AB Hydroxyethyl starch solns. (HES) are increasingly used for the compensation of surgical blood loss. The objective of this clin. trial was to compare a novel 6% HES 130/0.4 solution with a favorable pharmacol. profile and a standard 6% HES 200/0.5 solution for maintenance of hemodynamic stability in major gynecol. surgery. Sixty female patients aged 18-80 yr undergoing major gynecol. surgery with indication for perioperative colloidal volume replacement were enrolled in this prospective, randomized double-blinded clin. study. The administration of study medication was dependent on individual requirements to maintain hemodynamic stability. The amount of study medication required from induction of anesthesia until 6 h postoperatively served as the primary investigative parameter. Results: The two one-sided test procedure by Westlake demonstrated equivalence of mean infused vols. between HES 130/0.4 and HES 200/0.5 during the study period (1224 ± 544 mL and 1389 ± 610 mL, resp., $P < 0.05$). Perioperatively, hemodynamics did not differ significantly between treatment groups. While none of the mean values of coagulation parameters shifted outside the normal range, the

degree of hemodilution revealed reduced hematocrit values in HES 200/0.5 treated patients at 6 h postoperatively ($P < 0.05$). Moreover, prothrombin time (PT) was higher and consequently international normalized ratio (INR) was lower at the same time point for patients who received HES 130/0.4 ($P < 0.05$). This clin. trial demonstrated therapeutic equivalence of this novel low-substituted HES 130/0.4 solution and a standard HES 200/0.5 solution for perioperative volume replacement. Moreover, both HES prepns. were equally well-tolerated and safe.

AN 2003:820072 HCAPLUS <<LOGINID::20100503>>
DN 139:332786
TI Equivalence of hydroxyethyl starch HES 130/0.4 and HES 200/0.5 for perioperative volume replacement in major gynecological surgery
AU Sander, O.; Reinhart, K.; Meier-Hellmann, A.
CS Department of Anaesthesiology and Intensive Care Medicine, Friedrich-Schiller-University Jena, Jena, Germany
SO Acta Anaesthesiologica Scandinavica (2003), 47(9), 1151-1158
CODEN: AANEAB; ISSN: 0001-5172
PB Blackwell Publishing Ltd.
DT Journal
LA English
OSC.G 9 THERE ARE 9 CAPLUS RECORDS THAT CITE THIS RECORD (9 CITINGS)
RE.CNT 28 THERE ARE 28 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 3 OF 17 HCAPLUS COPYRIGHT 2010 ACS on STN
TI Hydroxyethyl starch (HES) 130/0.4 provides larger and faster increases in tissue oxygen tension in comparison with prehemodilution values than HES 70/0.5 or HES 200/0.5 in volunteers undergoing acute normovolemic hemodilution
AB Stable hemodynamics and improved rheol. are important effects of hemodilution with hydroxyethyl starch (HES) infusions. One clin. indicator of improved rheol. is increased tissue oxygen tension (tpO2). In this prospective, randomized, double-blinded, crossover study, we examined the effects of acute normovolemic hemodilution with HES 130/0.4 on hemodynamics and skeletal muscle tpO2 in comparison with conventional HES solns. Twelve healthy volunteers were randomly enrolled in each group. At an interval of >8 days, volunteers donated 18% of their calculated blood volume within 30 min and randomly received 6% HES 130/0.4, 6% HES 70/0.5, or 6% HES 200/0.5 (crossover design) in a 1:1.2 ratio to their blood loss. Hemodynamic variables, tpO2 in the quadriceps muscle, hematocrit, plasmatic HES concns., plasma viscosity, colloid osmotic pressures, and platelet aggregation were measured until 6 h after the infusion of HES. No differences were found among groups with respect to changes of hemodynamics, hematocrit, or platelet aggregation. With HES 200, colloid osmotic pressures and plasma viscosities were larger than after HES 70 ($P < 0.05$). HES 130 in comparison with HES 70 and 200 caused the fastest (30 min vs. 90 min and 150 min after hemodilution; $P < 0.05$) and largest increase of tpO2 in comparison to baseline (+93% vs. +33% and 40%; $P < 0.05$). In healthy volunteers undergoing acute normovolemic hemodilution, the newly designed HES 130/0.4 showed a more pronounced and earlier increase of skeletal muscle tpO2 in comparison with prehemodilution values than HES 70/0.5 or 200/0.5.
AN 2003:378561 HCAPLUS <<LOGINID::20100503>>
DN 139:78861
TI Hydroxyethyl starch (HES) 130/0.4 provides larger and faster increases in tissue oxygen tension in comparison with prehemodilution values than HES 70/0.5 or HES 200/0.5 in volunteers undergoing acute normovolemic hemodilution
AU Standl, Thomas; Burmeister, Marc-Alexander; Schroeder, Frank; Currlin,

Eike; Schulte, Jan; Freitag, Marc; Schulte am Esch, Jochen
CS Departments of Anesthesiology, University Hospital Hamburg-Eppendorf, Hamburg, Germany
SO Anesthesia & Analgesia (Baltimore, MD, United States) (2003), 96(4), 936-943
CODEN: AACRAT; ISSN: 0003-2999
PB Lippincott Williams & Wilkins
DT Journal
LA English
OSC.G 15 THERE ARE 15 CAPLUS RECORDS THAT CITE THIS RECORD (15 CITINGS)
RE.CNT 23 THERE ARE 23 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 4 OF 17 HCAPLUS COPYRIGHT 2010 ACS on STN
TI The effects of hydroxyethyl starch solutions on thromboelastography in preoperative male patients
AB Hydroxyethyl starches (HES) have been shown to decrease clot strength and to increase coagulation times assessed by thromboelastog. (TEG). HES with minimal anticoagulant side-effects is beneficial for plasma volume expansion in the perioperative setting. A comparison of the in vivo effects of high, middle and low mol. weight HES solns. on TEG variables has not been performed so far. Blood was obtained before and after i.v. infusion (10 mL kg-1) of either saline, HES 70/0.5/4 (mol. weight in kDa/degree of substitution/C2:C6 ratio), HES 130/0.4/9, HES 200/0.6/9.4, or HES 450/0.7/4.6 in 50 otherwise healthy patients. Thromboelastog. was performed in 360 μl of 1% celite activated citrated whole blood after recalcification. HES 450/0.7/4.6 prolonged reaction time indicating impairment of the plasmatic coagulation system. TEG parameters indicative for platelet function, including angle α, maximum amplitude and coagulation time, deteriorated after infusion of HES 450/0.7/4.6 and HES 70/0.5/4. HES 200/0.6/9.4 and HES 130/0.4/9 impaired platelet contribution to hemostasis only partially, decreasing two or one TEG platelet parameters, resp. Infusion of HES 450/0.7/4.6 compromises TEG parameters more than the other solns. tested, whereas HES 130/0.4/9 has the smallest effect. Further outcome-related studies are needed to assess the clin. relevance of our findings.
AN 2003:137114 HCAPLUS <<LOGINID::20100503>>
DN 138:297342
TI The effects of hydroxyethyl starch solutions on thromboelastography in preoperative male patients
AU Felfernig, M.; Franz, A.; Braunlich, P.; Fohringer, C.; Kozek-Langenecker, S. A.
CS Department of Anesthesiology and Intensive Care B, School of Medicine, University of Vienna, Vienna, Austria
SO Acta Anaesthesiologica Scandinavica (2003), 47(1), 70-73
CODEN: AANEAB; ISSN: 0001-5172
PB Blackwell Munksgaard
DT Journal
LA English
OSC.G 12 THERE ARE 12 CAPLUS RECORDS THAT CITE THIS RECORD (12 CITINGS)
RE.CNT 21 THERE ARE 21 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 5 OF 17 HCAPLUS COPYRIGHT 2010 ACS on STN
TI Hydroxyethylstarch as a risk factor for acute renal failure: is a change of clinical practice indicated?
AB A review. Hypovolemia is extremely common among surgical and intensive care patients. The best strategy for volume replacement therapy has been the focus of debate for several years. The lack of acceptance of hydroxyethylstarch (HES) for volume replacement therapy is most likely due to reports of abnormal coagulation and to recently published

studies indicating neg. effects of HES on renal function. All HES solns. are not created equal - they widely differ with regard to their physicochem. characteristics (concentration, mean mol. weight (Mw), degree of substitution [DS], C2/C6-substitution ratio). These differences have important consequences for adverse effects such as alterations in the coagulation process and on kidney function. Conflicting results about the effects of different HES solns. on renal function may also be due to varying clin. protocols, selection of patients, and different criteria for volume replacement. Theor. and documented hazards are associated with each kind of volume replacement therapy. There appears to be no reason to banish modern HES prepns. with a low or medium Mw (e.g. 70, 130 or 200kD) and a low DS (0.4 or 0.5) in patients without pre-existing kidney dysfunction. In patients with known renal dysfunction (e.g. plasma creatinine level >3 mg/dL), all HES prepns. should be used cautiously and other volume replacement regimens (e.g. gelatins) should be considered since no convincing data are yet available for the latest generation of HES (Mw 130; DS 0.4).

AN 2002:856392 HCAPLUS <<LOGINID::20100503>>
DN 137:345468
TI Hydroxyethylstarch as a risk factor for acute renal failure: is a change of clinical practice indicated?
AU Boldt, Joachim
CS Department of Anaesthesiology and Intensive Care Medicine, Klinikum der Stadt Ludwigshafen, Ludwigshafen, Germany
SO Drug Safety (2002), 25(12), 837-846
CODEN: DRSAEA; ISSN: 0114-5916
PB Adis International Ltd.
DT Journal; General Review
LA English
OSC.G 3 THERE ARE 3 CAPLUS RECORDS THAT CITE THIS RECORD (3 CITINGS)
RE.CNT 42 THERE ARE 42 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 6 OF 17 HCAPLUS COPYRIGHT 2010 ACS on STN
TI Randomized trial of hydroxyethyl starch versus gelatine for trauma resuscitation
AB Previous studies have demonstrated the rapid increase in systemic capillary permeability after blunt trauma and its association with poor outcome. There are theor. advantages in resuscitation with colloid fluids, which are well retained in the vascular compartment during times of capillary leak. The aim of this study was to compare the effects of post-trauma resuscitation with hydroxyethyl starch (HES) (mol. mass, 250 kDa) or gelatine (mol. mass, 30 kDa), the hypothesis being that HES would reduce capillary leak. Forty-five patients suffering blunt trauma were randomized on admission to receive either gelatine (Gelofusine) (n = 21) or HES (Pentaspan) (n = 24) for the first 24 h, after which the choice of fluid was at the discretion of the clinician. The mean Injury Severity Score for the HES and gelatine groups were 20.0 (range, 9-41) and 18.1 (range, 9-32), resp. (p = 0.43). Capillary permeability was assessed by urine albumin excretion rate for the first 24 h. For 5 days the daily mean PO2/FIO2 ratio, serum C-reactive protein, Hb, white cell and platelet counts, prothrombin, and activated partial thromboplastin time were recorded. Capillary permeability was lower in HES-treated patients during the first 24 h. Log mean (95% confidence interval) albumin excretion rate for gelatine and HES groups at 6 h were 117.5 (84.9) and 46.8 (24.3) μg/min (p = 0.011), at 12 h were 54.9 (30.0) and 17.2 (7.6) μg/min (p = 0.001), and at 24 h were 50.5 (23.4) and 23.6 (16.3) μg/min (p = 0.030), resp. The mean (95% confidence interval) PO2/FIO2 ratio for the HES and gelatine groups 48 h after admission were 324 (44) and 267 (43) mm Hg, resp. (p = 0.03). The mean (95% confidence interval) serum C-reactive protein in the

HES and gelatine groups 24 h after admission were 72.4 (19.2) and 105.7 (30.1) mg/L, resp. (p = 0.03). There were no significant differences in any of the hematol. parameters during the first 48 h. The results suggest that compared with gelatine, resuscitation with HES reduces posttrauma capillary leak.

AN 2000:37173 HCAPLUS <<LOGINID::20100503>>
DN 132:102622
TI Randomized trial of hydroxyethyl starch versus gelatine for trauma resuscitation
AU Allison, Keith P.; Gosling, Peter; Jones, Sarah; Pallister, Ian; Porter, Keith M.
CS West Midlands Regional Training Scheme, Solihull, West Midlands, B911TA, UK
SO Journal of Trauma: Injury, Infection, and Critical Care (1999), 47(6), 1114-1121
CODEN: JOTRFA; ISSN: 1079-6061
PB Lippincott Williams & Wilkins
DT Journal
LA English
OSC.G 22 THERE ARE 22 CAPLUS RECORDS THAT CITE THIS RECORD (22 CITINGS)
RE.CNT 36 THERE ARE 36 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 7 OF 17 HCAPLUS COPYRIGHT 2010 ACS on STN
TI Lactated Ringer's solution versus hydroxyethyl starch for volume replacement in autologous blood donors with cardiovascular disease. A controlled, randomized trial
AB Autologous blood donors with known cardiovascular disease were randomly allocated to receive, following withdrawal of 500 mL of blood, either no infusion (control) or a 25 mL/min i.v. infusion of either 1500 mL of lactated Ringer's solution (LRS) or 500 mL of 6% hydroxyethyl starch (HES). Starting before phlebotomy, arterial blood pressure was measured oscillometrically every 5 min until 90 min after donation. Group means showed little difference between the groups in blood pressure throughout the monitoring period. The proportion of patients who at least once had a ≥ 20% decrease from baseline in systolic blood pressure was 3-5 + greater in the control than in the LRS and HES group (50, 10, 15%). Systolic hypertensive episodes (≥ 20% increase over baseline) were observed more frequently in the LRS than in the control and HES group (41, 10, 18%). LRS and HES, administered at a volume ratio to blood loss of 3:1 and 1:1, reduced the incidence of systolic hypotensive episodes in autologous blood donors with cardiovascular disease. LRS at a 3:1 volume ratio to blood loss was associated with a high rate of systolic hypertension.
AN 1998:603385 HCAPLUS <<LOGINID::20100503>>
DN 129:211501
OREF 129:42791a,42794a
TI Lactated Ringer's solution versus hydroxyethyl starch for volume replacement in autologous blood donors with cardiovascular disease. A controlled, randomized trial
AU Kasper, Stefan-Mario; Dahlmann, Heinz; Mellinghoff, Hermann; Ellering, Juergen; Baumann, Marc; Buzello, Walter
CS Dep. Anesthesiology, Univ. Cologne, Cologne, D-50931, Germany
SO Vox Sanguinis (1998), 75(1), 26-31
CODEN: VOSAAD; ISSN: 0042-9007
PB S. Karger AG
DT Journal
LA English
OSC.G 2 THERE ARE 2 CAPLUS RECORDS THAT CITE THIS RECORD (2 CITINGS)

L8 ANSWER 8 OF 17 HCAPLUS COPYRIGHT 2010 ACS on STN

TI Gastric intramucosal pH changes after volume replacement with hydroxyethyl starch or crystalloid in patients undergoing elective abdominal aortic aneurysm repair

AB Gastric intramucosal pH (pHi), a surrogate marker of tissue oxygenation, falls following abdominal aorta aneurysm (AAA) repair. The authors tested the hypothesis that volume replacement with a hydroxyethyl starch solution would result in better preserved splanchnic oxygenation than would volume replacement with crystalloid solns. This was a prospective, randomized, nonblinded study set in a university-affiliated community hospital. Thirty patients undergoing elective AAA repair were studied. Patients were randomly selected to receive intraoperative and postoperative fluid replacement with either hetastarch or crystalloid. According to the study protocol, patients could not receive in excess of 3000 mL of hetastarch. Tissue oxygenation was assessed indirectly by measuring pHi using a nasogastric tonometer. Hemodynamic, oxygenation, and pHi data were collected preoperatively, preclamp, before unclamping, at the end of the procedure and postoperatively for 24 h. Coagulation parameters were determined preoperatively and postoperatively for 24 h. There were 18 male and 12 female patients, whose mean age was 66±9 yr. The intraoperative fluid balance was significantly greater in the crystalloid compared with the hetastarch group (4194±1500 mL v2929±1123 mL; P=.05, 95% confidence interval [Cl] 23 to 2519 mL). There were no significant differences in the amount of intraoperative blood loss or postoperative transfusion requirements between the two groups. The difference between the preoperative pHi and nadir was 0.07±0.03 in the hetastarch group compared with 0.13±0.04 in the crystalloid group (P =.001, Cl0.03 to 0.09). By multi-variate anal. the only variable that influenced the fall in pHi was the type of resuscitation fluid (F ratio of 7.63, P =.01). There were no significant differences in hemodynamic- and oxygenation-derived variables or coagulation parameters between the two groups of patients. The length of mech. ventilation, intensive care unit, and hospital stay was comparable between the two groups of patients. In patients undergoing major surgery, volume resuscitation with hydroxyethyl starch solns. may improve microvascular blood flow and tissue oxygenation.

AN 1997:366830 HCAPLUS <<LOGINID::20100503>>

DN 127:44686

OREF 127:8355a,8358a

TI Gastric intramucosal pH changes after volume replacement with hydroxyethyl starch or crystalloid in patients undergoing elective abdominal aortic aneurysm repair

AU Marik, Paul E.; Iglesias, Jose; Maini, Baltej

CS Depts. Critical Care Med. and Surgery, St. Vincent Hospital, Fallon Clinic and Univ. Of Mass. Med. School, Worcester, MA, 01604, USA

SO Journal of Critical Care (1997), 12(2), 51-55
CODEN: JCCAER; ISSN: 0883-9441

PB Saunders

DT Journal

LA English

OSC.G 9 THERE ARE 9 CAPLUS RECORDS THAT CITE THIS RECORD (9 CITINGS)

RE.CNT 24 THERE ARE 24 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 9 OF 17 HCAPLUS COPYRIGHT 2010 ACS on STN

TI Effects of a perfluorocarbon emulsion on regional cerebral blood flow and metabolism after fluid resuscitation from hemorrhage in conscious rats

AB Regional cerebral blood flow and metabolism were investigated after addition of a small volume of perfluorocarbon (PFC) emulsion to the resuscitation fluid after hemorrhage. Severe volume-controlled hemorrhage (40 mL/kg body weight (bw) withdrawn over 30 min followed by hypovolemia of 30 min

duration) was induced in conscious rats. While breathing 100% oxygen, the intravascular volume was repleted by the infusion of either 6% hydroxyethyl starch (mean mol. weight 200,000/0.5; HES) or 6% hydroxyethyl starch plus perflubron (90% weight/volume emulsion of perfluoroctylbromide, 3 mL/kg bw; HES-PFOB). Two hours after fluid resuscitation either iodo[14C]antipyrine or 2[14C]deoxy-D-glucose were infused. Local cerebral blood flow (LCBF) or local cerebral glucose utilization (LCGU) were determined in 34 brain structures using quant. autoradiog. Local cerebral metabolism was not disturbed in the HES and the HES-PFOB groups after fluid resuscitation, although slight redns. (mean -14%) were measured (HES-PFOB vs. HES). The HES-PFOB group showed LCBF values that were higher in the different brain structures than those of the HES group (mean +30%). A close correlation was found between LCGU and LCBF of the 34 brain structures in both groups (HES: r = 0.96,; HES-PFOB: r = 0.98), whereas the LCBF-to-LCGU ratio was reset from 2.2 mL/μmol in the HES group to 3.4 mL/μmol in the HES-PFOB group. The higher blood flows in the HES-PFOB group were sufficient to restore cerebral oxygen delivery to normal levels at a reduced arterial oxygen content. The results indicate that the addition of a small amount of perflubron to HES after fluid resuscitation from hemorrhage results in a restitution of cerebral oxygen delivery to normal levels due to an increased cerebral blood flow.

AN 1995:215401 HCAPLUS <<LOGINID::20100503>>
DN 122:652
OREF 122:147a,150a
TI Effects of a perfluorocarbon emulsion on regional cerebral blood flow and metabolism after fluid resuscitation from hemorrhage in conscious rats
AU Waschke, Klaus F.; Riedel, Martin; Albrecht, Detlef M.; van Ackern, Klaus; Kuschinsky, Wolfgang
CS Faculty of Clinical Medicine Mannheim, University of Heidelberg, Mannheim, Germany
SO Anesthesia & Analgesia (Baltimore, MD, United States) (1994), 79(5), 874-82
CODEN: AACRAT; ISSN: 0003-2999
DT Journal
LA English
OSC.G 11 THERE ARE 11 CAPLUS RECORDS THAT CITE THIS RECORD (11 CITINGS)

L8 ANSWER 10 OF 17 HCAPLUS COPYRIGHT 2010 ACS on STN
TI Pharmacokinetic parameters as criteria for clinical use of hydroxyethyl starch preparations
AB The pharmacokinetics of 2 com. hydroxyethyl starch prepns., differing only slightly in their pharmaceutical descriptions, were determined in volunteers. Significant differences were found, related not only to the degree of substitution but also to the position of the hydroxyethyl groups on the anhydroglucose skeleton. The C2/C6 hydroxyethylation ratio seemed to be the most significant for determining whether the starch would be slow- or long-acting when used for plasma replacement/hemodiln. Such data should be included in the pharmaceutical specifications for hydroxyethyl starch, because the differences may determine clin. use and efficacy.
AN 1991:464034 HCAPLUS <<LOGINID::20100503>>
DN 115:64034
OREF 115:10827a,10830a
TI Pharmacokinetic parameters as criteria for clinical use of hydroxyethyl starch preparations
AU Weidler, B.; Von Bormann, B.; Sommermeyer, K.; Lohmann, E.; Peil, J.; Hempelmann, G.
CS Abt. Anaesthesiol. Oper. Intensivmed., Justus-Liebig-Univ., Giessen, W-6300, Germany
SO Arzneimittel-Forschung (1991), 41(5), 494-8

CODEN: ARZNAD; ISSN: 0004-4172
DT Journal
LA German
OSC.G 16 THERE ARE 16 CAPLUS RECORDS THAT CITE THIS RECORD (16 CITINGS)

L8 ANSWER 11 OF 17 HCAPLUS COPYRIGHT 2010 ACS on STN
TI Hydroxyethyl starch as plasma expander and its preparation
AB Hydroxyethyl starch (I) which is degraded in a physiol. reasonable time with no residues is prepared by prehydrolysis of amylopectin-rich starch, hydroxyethylation to degree of substitution (DS) 0.15-0.5, and hydrolysis to mol. weight (6-60) + 104, giving I with ratio of C-2 substitution to C-6 substitution 8-20:1. Starch was washed and partially acetalized with MeOH, solvated with 1% methanolic HCl at 40° until the mol. weight was 900,000, washed with 0.1 N NaOH, hydroxyethylated in 1 N NaOH at 20° and pH ≥12, with 2-chloroethanol (0.77 mol/2.58 mol starch), hydrolyzed with HCl, and subjected to ultrafiltration to give I with mol. weight 234,000 and D.S. 0.26. Complete hydrolysis gave glucose 81.2%, 2-, 3-, and 6-hydroxyethyl glucose 12.42, 2.70, and 1.33%, resp., and bis(hydroxyethyl) glucose isomers 1.04%.
AN 1991:124846 HCAPLUS <<LOGINID::20100503>>
DN 114:124846
OREF 114:21257a,21260a
TI Hydroxyethyl starch as plasma expander and its preparation
IN Sommermeyer, Klaus; Cech, Franz; Weidler, Burghard; Henning, Klaus
PA Fresenius A.-G., Germany
SO Eur. Pat. Appl., 6 pp.
CODEN: EPXXDW
DT Patent
LA German
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 402724	A1	19901219	EP 1990-110531	19900602 <--
	EP 402724	B1	19960214		
	EP 402724	B2	20010509		
	R: AT, BE, CH, DE, ES, FR, GB, GR, IT, LI, LU, NL, SE				
	DE 3919729	A1	19901220	DE 1989-3919729	19890616 <--
	DE 3919729	C2	19920326		
	DE 3919729	C3	19970619		
	AT 134196	T	19960215	AT 1990-110531	19900602 <--
	ES 2082800	T3	19960401	ES 1990-110531	19900602 <--
	US 5218108	A	19930608	US 1990-533294	19900605 <--
	JP 03026701	A	19910205	JP 1990-156633	19900614 <--
PRAI	DE 1989-3919729	A	19890616 <--		

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT
OSC.G 5 THERE ARE 5 CAPLUS RECORDS THAT CITE THIS RECORD (5 CITINGS)

L8 ANSWER 12 OF 17 HCAPLUS COPYRIGHT 2010 ACS on STN
TI Lung and muscle water after crystalloid and colloid infusion in septic rats: effect on oxygen delivery and metabolism
AB The effect of crystalloid infusion on extravascular lung water and muscle water in septic rats was compared with that of colloid infusion. The relationship of lung and muscle edema to arterial oxygenation and muscle energy metabolism during sepsis was also examined Cecal ligation and perforation were used to induce sepsis. Five animals served as sham-operated controls. Five animals were infused with 0.9% saline solution and five with 10% low-mol.-weight hydroxyethyl starch (hetastarch). Thermodiln. cardiac output, plasma colloid osmotic

pressure, and arterial blood gases were sequentially measured over a 6-h interval. At 6 h, a biopsy specimen was taken from the rectus femoris and the lungs and adductor magnus muscle were harvested for gravimetric anal. (wet-dry/dry weight ratio). The colloid osmotic pressure was 16.1 mmHg in the control animals, 9.3 mm Hg in the saline solution-infused animals, and 21.6 mmHg in the hetastarch-infused animals at 6 h. The lung wet-dry/dry weight ratio was 3.46 in the control animals, 3.74 in the saline group, and 3.64 in the hetastarch group (difference not significant). Arterial oxygenation was not different in the three groups. Muscle wet-dry/dry weight ratio was 3.11 in the control animals, 2.75 in the hetastarch-infused animals, and 3.06 in the saline-infused group (not significant). There were no differences in skeletal muscle energy production or lactate/pyruvate ratio between the three groups. Thus, lung and muscle extravascular water is not increased with crystalloid as compared with colloid infusion during sepsis despite decreases in plasma colloid osmotic pressure. Furthermore, crystalloid infusion did not impair tissue energy metabolism compared with colloid infusion during sepsis.

AN 1989:128332 HCAPLUS <<LOGINID::20100503>>
DN 110:128332
OREF 110:20991a,20994a
TI Lung and muscle water after crystalloid and colloid infusion in septic rats: effect on oxygen delivery and metabolism
AU Rackow, Eric C.; Astiz, Mark E.; Schumer, William; Weil, Max Harry
CS Chicago Med. Sch., Univ. Health Sci., North Chicago, IL, 60064, USA
SO Journal of Laboratory and Clinical Medicine (1989), 113(2), 184-9
CODEN: JLCMAK; ISSN: 0022-2143
DT Journal
LA English

L8 ANSWER 13 OF 17 HCAPLUS COPYRIGHT 2010 ACS on STN
TI Effect of hydroxyethyl starch on the structure of thrombin- and reptilase-induced fibrin gels
AB The effect of hydroxyethyl starch (HES), a complex polysaccharide colloid plasma expander, on the structure of fibrin gels was studied turbidimetrically. HES at concns. as low as 2.5 mg/mL shortened the lag phase of turbidity increase and caused increased fibrin fiber mass/length ratios in both purified fibrin and plasma systems. For purified fibrin gels clotted with thrombin, the mass/length ratio increased in a linear fashion from 2.6 to 6.1 + 1012 daltons/cm as HES increased from 0 to 15 mg/mL. Fiber mass/length ratios for purified fibrin gels clotted with reptilase increased from 1.1 to 6.4 + 1012 daltons/cm over the same HES concentration range. The addition of 5 mmol/L Ca to either system produced addnl. increases in fiber size,. In 1:10 dilns. of plasma, HES shortened the lag phase, enhanced the rate of turbidity increase, and increased the final gel turbidity. The fiber mass/length ratio for plasma gels clotted with thrombin increased from 0.3 to 1.7 + 1012 daltons/cm as HES increased from 0 to 20 mg/mL. For plasma gels clotted with reptilase, the fiber mass/length ratio increased from 1.5 to 2.4 + 1012 daltons/cm over the same HES concentration range. The effects of HES are comparable to those of dextran at concns. <5 mg/mL and can be explained on the basis of HES-enhanced lateral association of fibrin fibers during polymerization

AN 1987:43723 HCAPLUS <<LOGINID::20100503>>
DN 106:43723
OREF 106:7125a,7128a
TI Effect of hydroxyethyl starch on the structure of thrombin- and reptilase-induced fibrin gels
AU Carr, Marcus E., Jr.

CS Dep. Med., Med. Coll. Virginia, and Med. Serv., Richmond, VA, USA
SO Journal of Laboratory and Clinical Medicine (1986), 108(6), 556-61
CODEN: JLCMAK; ISSN: 0022-2143
DT Journal
LA English
OSC.G 9 THERE ARE 9 CAPLUS RECORDS THAT CITE THIS RECORD (9 CITINGS)

L8 ANSWER 14 OF 17 HCAPLUS COPYRIGHT 2010 ACS on STN
TI Role on oncotic agents in saving effect of perfluorochemical emulsions in hemodilution
AB Survival prolongation was studied in rats which were hemodild. to a hematocrit value of as low as 7, 4, or 1% by stepwise exchange transfusion, alternating bleeding through the artery and infusing a perfluorochem. (FC) emulsion into the vein, with the combined use of oncotic agents taken into consideration to maintain the circulating plasma volume Plasma expander (PE) was indispensable to the use of FC emulsion for the survival of exchange-transfused rats. As an oncotic agent to be combined with FC emulsion, homologous plasma and 6% hydroxyethyl starch (HES) solution were better than dextran in rats. At the exchange transfusion with FC emulsion + PE, totaling 1.2 times the volume of blood eliminated, survival effect was better at a ratio of FC emulsion to PE of 1:3 than 3:1. Supplementary infusions of Fluosol-DA (an improved FC emulsion made isooncotic with 2.7% HES) carried out after the exchange transfusion at intervals of 24 h were effective in prolongation of survival.
AN 1977:581618 HCAPLUS <<LOGINID::20100503>>
DN 87:181618
OREF 87:28683a,28686a
TI Role on oncotic agents in saving effect of perfluorochemical emulsions in hemodilution
AU Matsumoto, Tsuyoshi; Watanabe, Masahiro; Hamano, Tetsuo; Hanada, Shuichi; Suyama, Tadakazu; Naito, Ryoichi
CS Cent. Res. Lab., Green Cross Corp., Osaka, Japan
SO Chemical & Pharmaceutical Bulletin (1977), 25(9), 2163-71
CODEN: CPBTAL; ISSN: 0009-2363
DT Journal
LA English

L8 ANSWER 15 OF 17 HCAPLUS COPYRIGHT 2010 ACS on STN
TI Hydroxyethyl starches
AB Hydroxyethyl starches with 2-(hydroxyethyl)glucose to 6-(hydroxyethyl)glucose molar ratios of 0.73-1.6, useful as blood plasma expanders (no data), were prepared by reaction of ethylene oxide with starch or hydrolyzed starch in the presence of NaOH or KOH (alkali-starch molar ratio >2.0). Addition of pyridine [110-86-1] or an inorg. salt, e.g. Na2SO4 [7757-82-6], to the reaction mixture impeded substitution of hydroxyethyl at the 2-position. Thus, 3.2 g ethylene oxide gas was introduced during 3 hr into an aqueous solution at 40° containing 4.05 g waxy maize starch and 5.0 g NaOH, after stirring 2 hr and cooling, cation exchange resins were added, the resins filtered, and Me2CO added to precipitate 4.0 g hydroxyethyl starch, degree of substitution 0.75 and 2-(hydroxyethyl)glucose to 6-(hydroxyethyl)glucose ratio 0.78.
AN 1975:533822 HCAPLUS <<LOGINID::20100503>>
DN 83:133822
OREF 83:21055a,21058a
TI Hydroxyethyl starches
IN Satoda, Isao
PA Morishita Pharmaceutical Co., Ltd., Japan
SO Brit., 9 pp.

CODEN: BRXXAA
DT Patent
LA English
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI GB 1395777	A	19750529	GB 1972-56060	19721205 <--
PRAI GB 1972-56060		19721205 <--		

OSC.G 2 THERE ARE 2 CAPLUS RECORDS THAT CITE THIS RECORD (2 CITINGS)

L8 ANSWER 16 OF 17 HCAPLUS COPYRIGHT 2010 ACS on STN
TI Hydroxyethyl starch as a plasma expander. III. Effects of hydroxyethyl starches with various degrees of substitution on the blood pressure of rats
AB Hydroxyethyl starch (HES) [9005-27-0] with 0.47.sim.0.62 degree of substitution (DS, the ratio of number of glucose residues substituted by -EtOH group to the total number of glucose residues) appeared to be a useful blood substitute. Blood pressure in rats was well maintained in the presence of HES with DS 0.47-0.92. However, HES with DS 0.66.sim.0.92 increased the sedimentation rate of erythrocytes.
AN 1973:413393 HCAPLUS <<LOGINID::20100503>>
DN 79:13393
OREF 79:2115a,2118a
TI Hydroxyethyl starch as a plasma expander. III. Effects of hydroxyethyl starches with various degrees of substitution on the blood pressure of rats
AU Irikura, Tsutomu; Kudo, Yoshitaka
CS Kyorin Chem. Lab., Tokyo, Japan
SO Oyo Yakuri (1972), 6(7), 1549-55
CODEN: OYYAA2; ISSN: 0300-8533
DT Journal
LA Japanese
OSC.G 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (1 CITINGS)

L8 ANSWER 17 OF 17 HCAPLUS COPYRIGHT 2010 ACS on STN
TI Effects of artificial expander agents on blood viscosity. Comparison with human albumin and PAMEG[poly[γ-(N-2-morphinylethyl)-α,L-glutamamide]] (synthetic polypeptide of glutamic acid)
AB Dextran of mol. weight 37,500 has less effect on blood viscosity than any other artificial expanders such as hydroxyethyl starch and poly(pyrrolidinone) [24968-97-6] in the so-called low mol. weight range. None of the artificial expanders examined in vitro, including the lowest mol. weight dextran Dx 10, decreased the viscosity of normal human blood. Human plasma albumin caused a smaller increase in viscosity than any of the artificial expanders of comparable mol. size. When poly[γ-(N-2-morphinylethyl)-α,L-glutamamide] was dissolved in blood plasma, the average increase in viscosity was 157%. The viscosity at 0.1/sec of a 45% red cell suspension in Ringer's solution was 9.9 centipoise (cps). After the addition of 4 g % albumin the viscosity was 11.6 cps, but when 4 g % PAMEG was substituted for the albumin, the viscosity was 208 cps. PAMEG is apparently far from being equivalent viscometrically to albumin in its effects on whole blood or on suspensions of washed red cells.
AN 1972:94819 HCAPLUS <<LOGINID::20100503>>
DN 76:94819
OREF 76:15225a,15228a
TI Effects of artificial expander agents on blood viscosity. Comparison with human albumin and PAMEG[poly[γ-(N-2-morphinylethyl)-α,L-glutamamide]] (synthetic polypeptide of glutamic acid)
AU Gregersen, Magnus I.

```
CS   Coll. Physicians Surg., Columbia Univ., New York, NY, USA
SO   Dextrans, Int. Symp., 1st (1971), Meeting Date 1968, 27-38.
     Editor(s): Derrick, John R. Publisher: Thomas, Springfield, Ill.
     CODEN: 24GRA5
DT   Conference
LA   English


=> d his

     (FILE 'HOME' ENTERED AT 16:12:59 ON 03 MAY 2010)

     FILE 'HCAPLUS' ENTERED AT 16:13:08 ON 03 MAY 2010
L1         2602 S HYDROXYETHYLSTARCH OR (HYDROXYETHYL STARCH) OR (HYDROXYETHYL(
L2         6228 S (PLASMA EXPANDER) OR HYPOVOLEMIA OR (VOLUME REPLACEMENT) OR (
L3          158 S L1 AND L2
L4         1765 S (PLASMA EXPANDER) OR HYPOVOLEMIA OR (VOLUME REPLACEMENT) OR (
L5          143 S L1 AND L4

     FILE 'STNGUIDE' ENTERED AT 16:14:41 ON 03 MAY 2010

     FILE 'HCAPLUS' ENTERED AT 16:15:09 ON 03 MAY 2010
L6      1978171 S SUBSTITUTED OR RATIO
L7           23 S L5 AND L6
L8           17 S L7 AND (PY<2005 OR AY<2005 OR PRY<2005)

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COST IN U.S. DOLLARS                                SINCE FILE      TOTAL
                                                         ENTRY    SESSION
FULL ESTIMATED COST                                      55.61      64.63

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)          SINCE FILE      TOTAL
                                                         ENTRY    SESSION
CA SUBSCRIBER PRICE                                     -14.45     -14.45

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STN INTERNATIONAL SESSION SUSPENDED AT 16:15:59 ON 03 MAY 2010

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Welcome to STN International!  Enter x:X

LOGINID:SSPTAEXO1623

PASSWORD:
 * * * * * * RECONNECTED TO STN INTERNATIONAL * * * * * *
SESSION RESUMED IN FILE 'HCAPLUS' AT 16:49:58 ON 03 MAY 2010
FILE 'HCAPLUS' ENTERED AT 16:49:58 ON 03 MAY 2010
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COST IN U.S. DOLLARS                                SINCE FILE      TOTAL
                                                         ENTRY    SESSION
FULL ESTIMATED COST                                      55.61      64.63

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)          SINCE FILE      TOTAL
                                                         ENTRY    SESSION
CA SUBSCRIBER PRICE                                     -14.45     -14.45
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=> s molecular weight
       1438592 MOLECULAR
        188752 WEIGHT
L9       81590 MOLECULAR WEIGHT
                (MOLECULAR(W)WEIGHT)

=> s (molecular weight) or mw
       1438592 MOLECULAR
        188752 WEIGHT
         81590 MOLECULAR WEIGHT
                (MOLECULAR(W)WEIGHT)
         91236 MW
L10     167589 (MOLECULAR WEIGHT) OR MW

=> s l3 and l10
L11         17 L3 AND L10

=> s l11 not l8
L12         15 L11 NOT L8

=> d l12 1-15 ti abs bib

L12  ANSWER 1 OF 15  HCAPLUS  COPYRIGHT 2010 ACS on STN
TI   PRO: hydroxyethylstarch can be safely used in the intensive care
     patient-the renal debate
AB   A review.  Correcting hypovolemia is fundamental when treating
     the critically ill.  Different hydroxyethylstarch (HES) prepns.
     with different physicochem. characteristics (mean mol. weight (Mw),
     molar substitution (MS), C2/C6 ratio, balanced/unbalanced) are available.
     The possible detrimental effect of HES on kidney function has become a
     major objection to using HES.  This review focuses on the effect of HES on
     kidney function.  First and second-generation HES with high Mw
     (>200 kD) and high MS (>0.5) have been shown to impair kidney function in
     some studies of septic patients, especially when using hyperoncotic HES.  More
     rapidly degradable HES prepns. (Mw 130 kD; MS < 0.5) did not
     cause deterioration of kidney function in a variety of clin. conditions.
     Even when kidney function was impaired (serum creatinine >1.5 mg/dL) this
     HES preparation was without neg. effect.  Dissolving HES in a balanced solution
     instead of saline may further improve the safety of HES with regard to
     kidney function.  Dose limitations of the specific HES preparation should be
     carefully considered.  Hyperoncotic HES should not be used in patients who
     are at risk of developing kidney dysfunction.  In patients without
     preexisting kidney dysfunction there seems to be no neg. effects of modern
     HES prepns.  In septic patients with reduced kidney function (serum
     creatinine >2.5 mg/dL) HES should be used cautiously, because studies of
     these patients are not available.  Dissolving HES in a balanced solution
     further improves the safety of HES with regard to kidney function.  At
     present, there seems to be no good reason to generally ban use of HES in
     our patients.
AN   2009:872595  HCAPLUS <<LOGINID::20100503>>
DN   152:295969
TI   PRO: hydroxyethylstarch can be safely used in the intensive care
     patient-the renal debate
AU   Boldt, Joachim
CS   Department of Anesthesiology and Intensive Care Medicine, Klinikum der
     Stadt Ludwigshafen, Ludwigshafen, 67063, Germany
SO   Intensive Care Medicine (2009), 35(8), 1331-1336
     CODEN: ICMED9; ISSN: 0342-4642
PB   Springer
DT   Journal; General Review
```

LA English
RE.CNT 34 THERE ARE 34 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L12 ANSWER 2 OF 15 HCAPLUS COPYRIGHT 2010 ACS on STN
TI Resuscitation from hemorrhagic shock with hydroxyethyl starch and coagulation changes
AB Administration of fluids to maintain or restore intravascular volume is a common intervention after hemorrhagic shock, but there is uncertainty whether the choice of fluid significantly influences outcome. Systemic parameters, microvascular perfusion, and functional capillary d. were used to characterize resuscitation from hemorrhagic shock with hydroxyethyl starch (HES) of different mol. wts. Studies were made in the hamster window chamber model to determine their effects on blood rheol. properties, restoration of perfusion and coagulation changes. Moderate hemorrhagic shock was induced by controlled arterial bleeding of 50% of blood volume, and hypovolemia was maintained for 1 h before resuscitation. Twenty-five percent of blood volume was restituted, and recovery was followed over 60 min. Low-mol. weight (MW) HES (L-HES) 130 kd, degree of substitution (DS) 0.40, and high-MW HES (H-HES) 670 kd, DS 0.75, were used as resuscitation fluids. Microthrombi formation was induced by endothelial laser irradiation H-HES improved systemic conditions, microcirculatory flow, and metabolic recovery after resuscitation when compared with L-HES. Mean arterial pressure was significantly improved after resuscitation with H-HES compared with L-HES, but lower than baseline and the sham group. Thrombus formation was impaired in both groups after resuscitation compared with sham. There was no difference in microthrombi formation between low- and H-HES for medium and large laser endothelial injuries. Our results indicate that fluid resuscitation with HES may increase the risk of bleeding, but not necessarily caused by the properties (MW and DS) of the colloid. Impairment of thrombus formation seems to be in part related to altered hemodynamics and transport inherent to hemodilution, leading to lowered platelet availability due to hemodilution and increased shear stress at the vessel wall when plasma viscosity is increased. The HES MW does not seem to be a factor in compromising platelet adherence on stimulated endothelium. The longer initial intravascular persistence of H-HES might result in longer-lasting volume effects.
AN 2007:1159670 HCAPLUS <<LOGINID::20100503>>
DN 148:45465
TI Resuscitation from hemorrhagic shock with hydroxyethyl starch and coagulation changes
AU Cabrales, Pedro; Tsai, Amy G.; Intaglietta, Marcos
CS La Jolla Bioengineering Institute, University of California, San Diego, La Jolla, CA, USA
SO Shock (2007), 28(4), 461-467
CODEN: SAGUAI; ISSN: 1073-2322
PB Lippincott Williams & Wilkins
DT Journal
LA English
OSC.G 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (1 CITINGS)
RE.CNT 35 THERE ARE 35 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L12 ANSWER 3 OF 15 HCAPLUS COPYRIGHT 2010 ACS on STN
TI Effect of plasma for volume replacement in induced hypovolemic shock. A comparative study of low and medium molecular weight hydroxyethyl starch substitutes
AB We studied the relative efficacy of two plasma substitute therapies in a canine model for hemorrhagic shock. Anesthetized dogs were bled to maintain a mean arterial pressure (mAP) at 50 mmHg and then administered a

single bolus injection of 6% hydroxyethyl starch (HES) with a mol. weight of 70 kDa (HES70 group) or 200 kDa (HES200 group) at a volume equivalent to the blood withdrawn. The efficacy of both therapies in maintaining the hemodynamic variables, the plasma colloidal and crystalloidal osmotic pressure (Pcop and Posm), and the circulating blood volume (CBV) were investigated. CBV was measured by the pulse-dye densitometry (PDD) method. After resuscitation, hemodynamic variables were better maintained in the HES200 group than in the HES70 group. Particularly, mAP, mean pulmonary arterial pressure, pulmonary arterial wedge pressure, cardiac index, left ventricular stroke work index, and maximum rate of left ventricular pressure change, were maintained at a satisfactorily stable level in the HES200 group as compared with the HES70 group. Moreover, Pcop and CBV in the HES200 group were significantly greater than those in the HES70 group. On the other hand, Posm did not differ between the two groups. HES200 may be a more effective volume replacement therapy than HES70 for induced hemorrhagic shock because of improvement and maintenance of hemodynamic variables, CBV and Pcop.

AN 2002:791203 HCAPLUS <<LOGINID::20100503>>
DN 137:315846
TI Effect of plasma for volume replacement in induced hypovolemic shock. A comparative study of low and medium molecular weight hydroxyethyl starch substitutes
AU Maruta, Kyoko
CS Dep. Anesthesiol., Sch. Med. Showa Univ., Japan
SO Showa Igakkai Zasshi (2002), 62(3), 188-193
CODEN: SIGZAL; ISSN: 0037-4342
PB Showa Daigaku, Showa Igakkai
DT Journal
LA Japanese

L12 ANSWER 4 OF 15 HCAPLUS COPYRIGHT 2010 ACS on STN
TI Plasma substituents for volume replacement in hemorrhagic shock: comparison of low and medium molecular weight hydroxyethyl starch
AB The aim of this study was to assess the relative efficacy of 2 volume replacement therapies in a canine model of induced hemorrhagic shock. Anesthetized dogs were bled to maintain mean arterial pressure (mAP) at 50 mm Hg for 30 min and then administered a single bolus injection of 6% hydroxyethyl starch (HES) with a mol. weight of 70 kd (HES70 group) or 200 kd (HES200 group) at a volume equivalent to the blood withdrawn. The authors examined the efficacy of both therapies in maintaining hemodynamic variables and splanchnic organ blood flow (ie, blood flow through the renal cortex, renal medulla, liver, and pancreas). After resuscitation, hemodynamic variables were better maintained in the HES200 group than in the HES70 group. In particular, HES200 better preserved mAP, cardiac index, mean pulmonary arterial pressure, pulmonary arterial wedge pressure, left ventricular stroke work index, and maximum rate of left ventricular pressure change. In both groups splanchnic organ blood flows decreased after hemorrhagic shock but increased after volume replacement resuscitation. After resuscitation splanchnic organ blood flow was greater in the HES200 group than in the HES70 group. The results of this study suggest that HES200 is more effective than HES70 as volume replacement therapy in a canine model of hemorrhagic shock, as measured by improvements in hemodynamic variables and splanchnic organ blood flow.
AN 2000:598288 HCAPLUS <<LOGINID::20100503>>
DN 134:65969
TI Plasma substituents for volume replacement in hemorrhagic shock: comparison of low and medium molecular weight hydroxyethyl starch
AU Kobori, Masao; Negishi, Hideru; Nagai, Hiroe; Iyama, Kyoko
CS Department of Anesthesiology, Showa University School of Medicine, Tokyo,

142-8666, Japan
SO Current Therapeutic Research (2000), 61(7), 414-421
CODEN: CTCEA9; ISSN: 0011-393X
PB Excerpta Medica, Inc.
DT Journal
LA English
RE.CNT 14 THERE ARE 14 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L12 ANSWER 5 OF 15 HCAPLUS COPYRIGHT 2010 ACS on STN
TI A study of plasma substitutes for volume replacement in intraoperative hemodilution technique ''estimation of circulating blood volume by pulse dye-densitometry
AB The purpose of this study was to exptl. compare the hemodynamic variables, plasma colloidal and crystalloid osmotic pressure (Pcop and Posm), and circulating blood volume (CBV), under normovolemic hemodilution in isoflurane-anesthetized dogs. We divided anesthetized dogs into two groups: a HES 70 group (hydroxyethyl starch, MW=70 kDa, 6% in saline), and a HES 200 groups (hydroxyethyl starch, MW=200 kDa, 6% in saline). Hemodilution was produced by exchanging blood (25mL/kg) with isovolemic artificial colloid of either HES 70 or HES 200. Measurements and sampling were taken before hemodilution, at the end of hemodilution, and 30, 60, 120, 180, 240, and 300 min after hemodilution. CBV was measured by pulse-dye densitometry (PDD) method. A significant increase in mean pulmonary arterial pressure (mPAP), cardiac index (CI), left ventricular stroke work index (LVSWI), and maximum rate of left ventricular pressure change (LV dp/dt maximum), and a significant decrease in systemic vascular resistance (SVR) values occurred after hemodilution in both groups. However, mAP, mPAP, pulmonary artery wedge pressure (PAWP) and LV dp/dt maximum values in group HES 70 decreased significantly over time compared with the pre-hemodilution condition. MPAP, CI, LVAWI and LV dp/dt maximum values in group HES 200 increased significantly. After hemodilution, CBV and Pcop increased significantly compared with the pre-hemodilution condition in both groups. In group HES 70, CBV and Pcop decreased from the pre-hemodilution condition over time, but not in group HES 200. Moreover, CBV and Pcop in group HES 200 significantly greater than those in group HES 70. Posm did not change significantly during any of the exptl. periods compared to the pre-hemodilution condition in both groups. These results suggest that HES 200 may be more effective than HES 70 for the normovolemic hemodilution. This is due to an improvement and a maintenance in hemodynamic variables, CBV and Pcop.
AN 2000:403485 HCAPLUS <<LOGINID::20100503>>
DN 133:256612
TI A study of plasma substitutes for volume replacement in intraoperative hemodilution technique ''estimation of circulating blood volume by pulse dye-densitometry
AU Nagai, Hiroe; Kobori, Masao
CS School of Medicine, Showa University, The purpose of this study was to experimentally compare the, Japan
SO Junkan Seigyo (2000), 21(1), 47-53
CODEN: JUSEE7; ISSN: 0389-1844
PB Nippon Junkan Seigyo Igakkai
DT Journal
LA English
RE.CNT 21 THERE ARE 21 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L12 ANSWER 6 OF 15 HCAPLUS COPYRIGHT 2010 ACS on STN
TI Effects of hydroxyethyl starch infusion on lung fluid balance in hemorrhagic sheep

AB The present study was designed to investigate the effect of relatively low mol. hydroxyethyl starch (HES:Mw 70,000) on pulmonary hemodynamics and lymph flow balance during resuscitation from hemorrhagic hypotension employing instrumented and unanesthetized sheep with chronic lung lymph fistula. After baseline measurements for 2 h, animals were bled from a catheter placed in the artery to maintain systemic hypotension of 60-65 mmHg. After establishment of hemorrhagic hypotension, HES (HES group: n = 6) or normal saline (NS group: n = 5) was infused for one hour. The volume of infused solution was equal to the volume of shed blood in each animal. HES infusion restored systemic arterial pressure much more rapidly than NS. HES also produced significant increases in pulmonary arterial and left atrial pressures, and cardiac output. These parameters at the end of HES infusion were significantly higher than those with NS. The actual oncotic pressure gradient (plasma-lymph) was transiently widened during HES infusion. Both HES and NS infusion produced an increase in lung lymph flow, but these increased levels did not show significant differences (4.8±1.6 mL/15 min with HES vs. 3.8±1.2 mL/15 min with NS). In conclusion, low mol. HES is a useful plasma substitute as it produced a transient beneficial effect on the oncotic gradient in pulmonary hemodynamics during the resuscitation from hemorrhage. HES solution also did not cause extravascular water retention that might induce respiratory disturbance at the early stage of resuscitation from hemorrhagic hypovolemia.
AN 1999:447446 HCAPLUS <<LOGINID::20100503>>
DN 131:134472
TI Effects of hydroxyethyl starch infusion on lung fluid balance in hemorrhagic sheep
AU Kaneki, Toshimichi
CS Sch. Med., Shinshu Univ., Matsumoto, 390-8621, Japan
SO Shinshu Igaku Zasshi (1999), 47(2), 119-128
CODEN: SIZAA7; ISSN: 0037-3826
PB Shinshu Igakkai
DT Journal
LA Japanese

L12 ANSWER 7 OF 15 HCAPLUS COPYRIGHT 2010 ACS on STN
TI Hemorheological, micro- and macrocirculatory effects of an infusion of 500 ml of 6% medium-molecular-weight hydroxyethyl starch (Haes 200,000/0.5)
AB The effects of hypervalemic hemodilution on blood macro- and microcirculation, blood viscosity; and conjunctional O tension were studied in healthy humans given a 500-mL i.v. infusion of 6% solution of hydroxyethyl starch Haes 200,000/0.5. Blood pressure and heart rate remained unchanged during and after the infusion. At 1 h after the infusion there was a tendency towards an increase in blood flow in the common carotid artery which then returned to normal. The capillary circulation as well as the conjunctival O partial pressure were increased after 3 h. This correlated well with the decrease in plasma viscosity and erythrocyte aggregation. The effect of hemodilution using the hydroxyethyl starch solution with a substitution degree of 50% on microcirculation was probably due to the rheol. and not hemodynamic effects.
AN 1989:608904 HCAPLUS <<LOGINID::20100503>>
DN 111:208904
OREF 111:34467a,34470a
TI Hemorheological, micro- and macrocirculatory effects of an infusion of 500 ml of 6% medium-molecular-weight hydroxyethyl starch (Haes 200,000/0.5)
AU Jung, F.; Waldhausen, P.; Mrowietz, C.; Spitzer, S.; Kiesewetter, H.; Wenzel, E.

CS Abt. Klin. Haemostaseol. Transfusionsmed., Univ. Saarlandes, Homburg/Saar, D-6650, Fed. Rep. Ger.
SO Infusionstherapie (1989), 16(4), 148-52, 154
CODEN: INFUEW
DT Journal
LA German
OSC.G 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (1 CITINGS)

L12 ANSWER 8 OF 15 HCAPLUS COPYRIGHT 2010 ACS on STN
TI Hemodilution with low-molecular-weight hydroxyethyl starch after experimental focal cerebral ischemia in rabbits
AB Low-mol.-weight hydroxyethyl starch (hetastarch) was administered to rabbits after embolic infarction and the sp. gr. and total water content were measured. Evidence of ischemic edema in the hemisphere ipsilateral to the embolic arterial occlusion was found, but the measures of edema were not different in treated and control groups. Of those rabbits suffering severe neurol. deficit, mortality was 2 of 13 in the treated compared with 7 of 12 in the control groups. Thus, hemodiln. with low-mol.-weight hydroxyethyl starch did not exacerbate cerebral edema and may have improved survival in this model.
AN 1988:143196 HCAPLUS <<LOGINID::20100503>>
DN 108:143196
OREF 108:23323a,23326a
TI Hemodilution with low-molecular-weight hydroxyethyl starch after experimental focal cerebral ischemia in rabbits
AU Lyden, P. D.; Alving, L. I.; Zivin, J. A.; Rothrock, J. F.
CS Dep. Neurol., Veterans Adm. Med. Cent., San Diego, CA, USA
SO Stroke (1988), 19(2), 223-7
CODEN: SJCCA7; ISSN: 0039-2499
DT Journal
LA English
OSC.G 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (1 CITINGS)

L12 ANSWER 9 OF 15 HCAPLUS COPYRIGHT 2010 ACS on STN
TI Hydroxyethyl starch as a plasma expander: physicochemical properties and enzymic degradation
AB Hydroxyethyl starch (HES) as a plasma expander was subjected to measurements of fundamental physicochem. properties as a polymer. In order to investigate the efficacy and security for the clin. use, enzymic degradation of HES was studied in vitro with Bacillus amyloliquefaciens α-amylase (BLA) and with human plasma. A fast decrease of the intrinsic viscosity, η, of HES in the initial stage of degradation with BLA was followed by a gradual decrease and approach to limiting values, which depended on the samples. Original and degraded samples of HES were fractionated by gel filtration, and several properties of the fractions were measured. Different relations between η and weight average mol. wts. (Mw) were obtained, and the structure and some properties of the fractions should be different among the original samples; HES is a highly branched polymer. Characteristics of HES were noticeable heterogeneities not only in the mol. weight spread over very wide region but also in the structure and the degree of substitution (D.S.) both inter- and intra-molecularly. Two samples of HES, 6-HES and Hessol, having high values of Mw and d.s., contained fractions of very high mol. weight and were degraded insufficiently with enzyme. Remaining fragments of high-mol. weight could not permeate the kidney membrane, suggesting the possibilities of remaining and/or accumulation of them in human bodies. On the other hand, Hespander, having small a Mw and d.s. was degraded as fast as amylopectin. In this HES the substitution of hydroxyethyl groups into amylopectin do

not affect the validity to prolong the persistence time of the plasma expander. Considerable amount of small mols. in Hespander, contained originally and produced by degradation, could be excreted rapidly and may impair the kidney function, besides the very small mols. may be released through vascular wall resulting in the reduction of efficacy as the plasma expander and the possibilities of accumulation into organs and tissues in human bodies. Thus, the efficacy and security of the present products of HES are not reliable as plasma expanders, and further investigations and improvements should be required for the clin. use.

AN 1987:502587 HCAPLUS <<LOGINID::20100503>>
DN 107:102587
OREF 107:16633a,16636a
TI Hydroxyethyl starch as a plasma expander: physicochemical properties and enzymic degradation
AU Ohta, Kazuko; Kawahara, Kazuo
CS Sch. Pharm. Sci., Nagasaki Univ., Nagasaki, Japan
SO Seitai Zairyo (1987), 5(1), 3-13
CODEN: SEZAEH; ISSN: 0910-304X
DT Journal
LA Japanese

L12 ANSWER 10 OF 15 HCAPLUS COPYRIGHT 2010 ACS on STN
TI Improvement of the flow properties of blood by infusion of low molecular weight hydroxyethyl starch (Expafusin) in healthy volunteers
AB The i.v. infusion of the plasma expander Expafusin [73666-73-6] into healthy volunteers improved blood rheol. properties and flow, and these effects could be maintained for 3 h by repeated infusions. Blood and plasma viscosities were decreased, red cell deformability was improved, and erythrocyte aggregation was inhibited. Hematocrit. and total blood protein were reduced by the infusion.
AN 1980:209149 HCAPLUS <<LOGINID::20100503>>
DN 92:209149
OREF 92:33771a,33774a
TI Improvement of the flow properties of blood by infusion of low molecular weight hydroxyethyl starch (Expafusin) in healthy volunteers
AU Ehrly, A. M.; Landgraf, H.; Saeger-Lorenz, K.; Hasse, S.
CS Zent. Inn. Med., Johann-Wolfgang-Goethe-Univ., Frankfurt/Main, Fed. Rep. Ger.
SO Infusionstherapie und Klinische Ernaehrung - Forschung und Praxis (1979), 6(6), 331-6
CODEN: IKEFAP; ISSN: 0378-0791
DT Journal
LA German

L12 ANSWER 11 OF 15 HCAPLUS COPYRIGHT 2010 ACS on STN
TI A clinical study of low molecular weight-hydroxyethyl starch, a new plasma expander
AB The pharmacokinetics of a new plasma expander, low mol. weight hydroxyethyl starch (LMW-HES) [9005-27-0] was examined in normovolemic men. At 1 h post-infusion, 13.5% of the total dose of LMW-HES injected was excreted in the urine, 50.2% was present in the intravascular space, and 36.3% was unaccounted for. At 24 h post-infusion, 65.5% of the total dose of injected LMW-HES was excreted in the urine, 4.1% remained intravascularly, and 30.4% was unaccounted for. The plasma volume increased rapidly from a mean value of 45.7 mL kg-1 to a maximum value of 57.9 mL kg-1 immediately post-injection, then gradually returned to normal over 24 h. The infusion of an average of 58.1 g had no

effect on renal and hepatic biochem. indexes. LMW-HES appears to be safe and effective, and should be of value clin. when rapid and short-lived augmentation of the plasma volume is required.
AN 1979:482958 HCAPLUS <<LOGINID::20100503>>
DN 91:82958
OREF 91:13299a,13302a
TI A clinical study of low molecular weight-hydroxyethyl starch, a new plasma expander
AU Mishler, J. M.; Parry, E. S.; Sutherland, B. A.; Bushrod, J. R.
CS Med. Universitaetsklin. Koeln, Cologne, 5/41, Fed. Rep. Ger.
SO British Journal of Clinical Pharmacology (1979), 7(6), 619-22
CODEN: BCPHBM; ISSN: 0306-5251
DT Journal
LA English
OSC.G 3 THERE ARE 3 CAPLUS RECORDS THAT CITE THIS RECORD (3 CITINGS)

L12 ANSWER 12 OF 15 HCAPLUS COPYRIGHT 2010 ACS on STN
TI Characterization of hydroxyethyl starch used as a plasma expander
AB Intrinsic viscosities, and number and weight average mol. wts. were determined for a com.
sample of hydroxyethyl starch (I) [9005-27-0] and its fractions. The exponent a of the Mark-Houwink equation was 0.27 for 0.1 M-NaCl aqueous solution and 0.24 for DMF solution, showing that I has many branches.
Compared with the mol. weight, Mw = 18.45 + 104, the viscosity was very low, 0.165 dL/g in H2O, possibly because of such a highly branched mol. configuration.
AN 1979:478833 HCAPLUS <<LOGINID::20100503>>
DN 91:78833
OREF 91:12677a,12680a
TI Characterization of hydroxyethyl starch used as a plasma expander
AU Sakamoto, Ryuichi; Kojima, Tokuhisa; Yamaguchi, Shizuo
CS Fac. Eng., Univ. Gifu, Gifu, Japan
SO Gifu Daigaku Kogakubu Kenkyu Hokoku (1979), (29), 22-6
CODEN: GDKHAO; ISSN: 0376-0332
DT Journal
LA English

L12 ANSWER 13 OF 15 HCAPLUS COPYRIGHT 2010 ACS on STN
TI Molecular weight, substitution and impurity studies of some hydroxyethyl starch plasma volume expanders
AB Volex and Plasmatonin com. brands of hydroxyethyl starch [9005-27-0] plasma expanders exhibited d.s. of 0.65 and 0.57, resp., mol. weight of 397,000 and 477,000, resp., and ethylene glycol [107-21-1] % of 0.01 and 0.01%, resp. D.s. is an important parameter and largely dets. the rate of elimination of the substance from the blood. Ethylene glycol, a persistent impurity in these infusion solns., was determined by gas chromatog. Volex also contained 3 ppm acetophenone [98-86-2] and 3 ppm 2-phenyl-2-propanol [617-94-7] as impurities.
AN 1976:598134 HCAPLUS <<LOGINID::20100503>>
DN 85:198134
OREF 85:31563a,31566a
TI Molecular weight, substitution and impurity studies of some hydroxyethyl starch plasma volume expanders
AU De Belder, A. N.; Larsson, Sven O.; Markstrom, Sylvia
CS Dep. Chem. Res., Pharm. AB, Uppsala, Swed.
SO IRCS Medical Science: Library Compendium (1976), 4(10), 457
CODEN: IRLCDZ; ISSN: 0305-6651

DT Journal
LA English

L12 ANSWER 14 OF 15 HCAPLUS COPYRIGHT 2010 ACS on STN
TI Hydroxyethyl starch as a plasma expander. IV. Subacute toxicity tests on high-molecular weight hydroxyethyl starch
AB Hydroxyethyl starch [9005-27-0] (7g) dissolved in 100 ml Ringer's solution (HES-R) was less toxic than the starch dissolved in 0.9% NaCl (HES-S). Rabbits i.v. infused with 90 ml HES-R/kg/day for 1 month survived, whereas all those infused with HES-S died. No significant change was observed when 10-30ml either HES-R or HES-S/kg/day was administered.
AN 1973:413570 HCAPLUS <<LOGINID::20100503>>
DN 79:13570
OREF 79:2155a,2158a
TI Hydroxyethyl starch as a plasma expander. IV. Subacute toxicity tests on high-molecular weight hydroxyethyl starch
AU Irikura, Tsutomu; Tamada, Terumi; Okada, Kodo; Ishida, Ryozo; Kudo, Yoshitaka
CS Kyorin Chem. Lab., Tokyo, Japan
SO Oyo Yakuri (1972), 6(7), 1557-65
CODEN: OYYAA2; ISSN: 0300-8533
DT Journal
LA Japanese
OSC.G 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (1 CITINGS)

L12 ANSWER 15 OF 15 HCAPLUS COPYRIGHT 2010 ACS on STN
TI Hydroxyethyl starch as a plasma expander. II. Influences of molecular weight of hydroxyethyl starch on its physicochemical and biological properties
AB Hydroxyethyl starch (HES) was studied concerning the relation between its physicochem. properties and biol. activities to obtain the most desirable plasma expander. Since degree of substitution (DS) influences the biol. activity, the mol. weight effect was examined with DS at 0.43-0.55. After infusion of 15 ml/kg of 6% HES solution in saline into rabbits the persistence of polysaccharides in blood was determined HES with higher mol. weight was more persistent with DS constant The mol. weight had little influence on the amount of reducing sugars formed when resistance against pig pancreas α-amylase was tested in vitro. HES with DS 0.54 and mol. weight about 216,000 was hydrolyzed with HCl and the physicochem. properties and the biol. activities of the hydrolyzates were examined It appeared that hydrolysis of HES with HCl resulted in separation into 2 or more intermediate lower mol. weight polysaccharides besides the reducing sugar liberation.
AN 1971:123531 HCAPLUS <<LOGINID::20100503>>
DN 74:123531
OREF 74:19967a,19970a
TI Hydroxyethyl starch as a plasma expander. II. Influences of molecular weight of hydroxyethyl starch on its physicochemical and biological properties
AU Tamada, Terumi; Okada, Kodo; Ishida, Ryozo; Kamishita, Katsuyuki; Irikura, Tsutomu
CS Kyorin Chem. Lab., Tokyo, Japan
SO Chemical & Pharmaceutical Bulletin (1971), 19(2), 286-91
CODEN: CPBTAL; ISSN: 0009-2363
DT Journal
LA English

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OSC.G   1     THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (1 CITINGS)


=> d his

     (FILE 'HOME' ENTERED AT 16:12:59 ON 03 MAY 2010)

     FILE 'HCAPLUS' ENTERED AT 16:13:08 ON 03 MAY 2010
L1          2602 S HYDROXYETHYLSTARCH OR (HYDROXYETHYL STARCH) OR (HYDROXYETHYL(
L2          6228 S (PLASMA EXPANDER) OR HYPOVOLEMIA OR (VOLUME REPLACEMENT) OR (
L3           158 S L1 AND L2
L4          1765 S (PLASMA EXPANDER) OR HYPOVOLEMIA OR (VOLUME REPLACEMENT) OR (
L5           143 S L1 AND L4

     FILE 'STNGUIDE' ENTERED AT 16:14:41 ON 03 MAY 2010

     FILE 'HCAPLUS' ENTERED AT 16:15:09 ON 03 MAY 2010
L6       1978171 S SUBSTITUTED OR RATIO
L7            23 S L5 AND L6
L8            17 S L7 AND (PY<2005 OR AY<2005 OR PRY<2005)
L9         81590 S MOLECULAR WEIGHT
L10       167589 S (MOLECULAR WEIGHT) OR MW
L11           17 S L3 AND L10
L12           15 S L11 NOT L8

=> log hold

COST IN U.S. DOLLARS                                SINCE FILE      TOTAL
                                                       ENTRY    SESSION
FULL ESTIMATED COST                                   105.02     114.04

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)          SINCE FILE      TOTAL
                                                       ENTRY    SESSION
CA SUBSCRIBER PRICE                                    -27.20     -27.20

 SESSION WILL BE HELD FOR 120 MINUTES
STN INTERNATIONAL SESSION SUSPENDED AT 16:50:39 ON 03 MAY 2010

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LOGINID:SSPTAEXO1623

PASSWORD:
 * * * * * * RECONNECTED TO STN INTERNATIONAL * * * * * *
SESSION RESUMED IN FILE 'HCAPLUS' AT 17:00:21 ON 03 MAY 2010
FILE 'HCAPLUS' ENTERED AT 17:00:21 ON 03 MAY 2010
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COST IN U.S. DOLLARS                                SINCE FILE      TOTAL
                                                       ENTRY    SESSION
FULL ESTIMATED COST                                   105.02     114.04

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)          SINCE FILE      TOTAL
                                                       ENTRY    SESSION
CA SUBSCRIBER PRICE                                    -27.20     -27.20
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=> s (high molecular weight) or hmw
       4921425 HIGH
       1438592 MOLECULAR
        188752 WEIGHT
         15398 HIGH MOLECULAR WEIGHT
                 (HIGH(W)MOLECULAR(W)WEIGHT)
          3684 HMW
L13      18142 (HIGH MOLECULAR WEIGHT) OR HMW

=> s l1 and l13
L14         19 L1 AND L13

=> s l14 not (l8 or l11)
L15         18 L14 NOT (L8 OR L11)

=> s l15 and (PY<2005 or AY<2005 or PRY<2005)
      25158051 PY<2005
       5164796 AY<2005
       4643928 PRY<2005
L16         14 L15 AND (PY<2005 OR AY<2005 OR PRY<2005)

=> d l16 1-14 ti abs bib

L16  ANSWER 1 OF 14  HCAPLUS  COPYRIGHT 2010 ACS on STN
TI   Hydroxyethyl starch (HES) in the urine after multiple
     infusion of HES (450/0.7): physicochemical changes of the substance
     characteristics of a highly substituted, high-molecular
     -weight HES
AB   Unavailable
AN   2005:1202514  HCAPLUS <<LOGINID::20100503>>
DN   144:17050
TI   Hydroxyethyl starch (HES) in the urine after multiple
     infusion of HES (450/0.7): physicochemical changes of the substance
     characteristics of a highly substituted, high-molecular
     -weight HES
AU   Lesch, Alexander
CS   Germany
SO   (2004) No pp. given  Avail.: Metadata on Internet Documents,
     Order No. 28754
     From: Metadata Internet Doc. [Ger. Diss.] 2004, (D1028-2), No pp. given
     URL: http://www.meind.de/search.py?recid=28754
DT   Dissertation
LA   German

L16  ANSWER 2 OF 14  HCAPLUS  COPYRIGHT 2010 ACS on STN
TI   The Effects of High Molecular Weight
     Hydroxyethyl Starch Solutions on Platelets
AB   Physicochem. characteristics of hydroxyethyl starch
     (HES) mols. determine their side effects on hemostasis.  Our aim in the present
     expts. was to test the antiplatelet effect of novel high mol. weight HES.
     Citrated whole blood was hemodiluted in vitro (0% and 20%) with either HES
     550 (Hextend), HES 600 (6%Hetastarch-Baxter), HES 200 (Elohaest), or the
     solvent of Hextend in its com. available solution  The availability of
     glycoprotein IIb-IIIa was assessed on nonstimulated and on agonist-induced
     platelets using flow cytometry.  Glycoprotein IIb-IIIa availability
     increased significantly after hemodilution with Hextend and its solvent by
     23% and 24%, resp., but decreased in the presence of 6% Hetastarch-Baxter
     and Elohaest by 18% and 15%, resp., with no significant difference between
     the latter two colloids.  This study shows that Hextend does not inhibit
     platelet function as anticipated by its high mol. weight and degree of
     substitution.  The unexpected platelet stimulating effect of Hextend is
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unique among the currently available HES prepns. and may, at least in part, be induced by its solvent containing calcium chloride dihydrate (2.5 mmol/L). The platelet-inhibiting effect of 6%Hetastarch-Baxter was not significantly different from that of medium mol. weight HES 200.

AN 2004:679330 HCAPLUS <<LOGINID::20100503>>
DN 142:245773
TI The Effects of High Molecular Weight Hydroxyethyl Starch Solutions on Platelets
AU Deusch, Engelbert; Thaler, Ulrich; Kozek-Langenecker, Sibylle A.
CS Department of Anesthesiology and Intensive Care, Vienna Medical University, Austria
SO Anesthesia & Analgesia (Hagerstown, MD, United States) (2004), 99(3), 665-668
CODEN: AACRAT; ISSN: 0003-2999
PB Lippincott Williams & Wilkins
DT Journal
LA English
OSC.G 15 THERE ARE 15 CAPLUS RECORDS THAT CITE THIS RECORD (15 CITINGS)
RE.CNT 25 THERE ARE 25 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L16 ANSWER 3 OF 14 HCAPLUS COPYRIGHT 2010 ACS on STN
TI Preparation of high-molecular weight antioxidants, and topical skin medicament containing them
AB High-mol. weight antioxidants consisting of antioxidants modified by 1 or ≥2 polysaccharides having hydroxy, carboxy, or amino functional groups are prepared Polysaccharides contains amino sugar and/or uronic acid or are selected from cellulose and starch derivs. Also disclosed are topical skin medicaments containing 1 or ≥2 high-mol. weight antioxidants described above. These polysaccharides-modified antioxidants are stable and easily retained on skin surface and exhibit antioxidant activity on skin surface by removing active oxygen species. Thus, to a solution of 10.0 g gallic acid in 200 mL pyridine was slowly added 12.6 g SOCl2 under ice-cooling, stirred for 1 h under ice-cooling, treated with EtOAc, and washed with water a few times, and the EtOAc layer was separated, dried over MgSO4, concentrated under reduced pressure to give 9.15 g gallic acid chloride. To a solution of 0.5 g 2-hydroxypropyl cellulose (Tokyo Kasei Kogyo Inc., Japan, viscosity 6-10 mpa.S, degree of substitution of 1, 6.8 mmol) in 30 mL pyridine was added the acid chloride at room temperature, stirred at room temperature for 18 h, treated with 20 mL isopropanol and 20 mL pyridine, stirred for 2 h to remove excess unreacted acid chloride, and treated with 300 mL Et2O to precipitate the product, which was removed by filtration and dried to give 1.06 g 2-hydroxypropyl cellulose gallic acid ester (I) (56.0 weight% substitution ratio). I showed IC50 of 0.076 mg/mL against oxidation of 1,1-diphenyl-2-picrylhydrazylethanol. A lotion containing 0.5 weight% I at 0.2 g/day applied on a back of hairless mice prevented the wrinkle formation when the mice were irradiated by UVB at 100 mJ/cm2 three-times per wk for 20 wk.

AN 2002:482639 HCAPLUS <<LOGINID::20100503>>
DN 137:47399
TI Preparation of high-molecular weight antioxidants, and topical skin medicament containing them
IN Kyoutani, Hiroki
PA Noevir Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 10 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE

PI	JP 2002179578	A	20020626	JP 2000-380274	20001214 <--
PRAI	JP 2000-380274		20001214 <--		

OSC.G 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (1 CITINGS)

L16 ANSWER 4 OF 14 HCAPLUS COPYRIGHT 2010 ACS on STN

TI Effects of resuscitation with hydroxyethyl starch (HES) on pulmonary hemodynamics and lung lymph balance in hemorrhagic sheep; comparative study of low- and high-molecular-weight HES

AB Studies of extremely low- and high-mol.-weight HES were performed to evaluate the effects of these solns. on lung lymph filtration during resuscitation. Conscious sheep were bled from an arterial line to maintain shock. After 2 h of hemorrhage, the following solns. were infused for 1 h: low-mol.-weight HES (mol. weight 70,000, substitution fractions 0.5-0.55); high-mol.-weight HES (mol. weight 450,000, substitution fractions 0.65); normal saline. The amount of solution infused was the same as the volume of blood lost. Both low- and high-mol.-weight HES equally restored systemic arterial pressure and cardiac output and increased pulmonary microvascular pressure. However, the actual oncotic pressure gradient (plasma/lymph) rose transiently during infusion of low-mol.-weight HES, while high-mol.-weight HES increased the oncotic pressure gradient even after cessation of the infusion. Lung lymph flow during and after resuscitation with low-mol.-weight HES and saline rose significantly from the preshock value. There was no significant difference between low-mol.-weight HES and saline with respect to effects on lung lymph flow. However, lung lymph flow after high-mol.-weight HES was less than that after low-mol.-weight HES. These data suggest that low-mol.-weight HES is as useful as a plasma substitute as high-mol.-weight HES but has the possibility of increasing lung lymph filtration during the early phase of resuscitation.

AN 2002:41206 HCAPLUS <<LOGINID::20100503>>

DN 137:195249

TI Effects of resuscitation with hydroxyethyl starch (HES) on pulmonary hemodynamics and lung lymph balance in hemorrhagic sheep; comparative study of low- and high-molecular-weight HES

AU Kaneki, Toshimichi; Koizumi, Tomonobu; Yamamoto, Hiroshi; Fujimoto, Keisaku; Kubo, Keishi; Shibamoto, Toshishige

CS First Department of Internal Medicine, Shinshu University School of Medicine, Shinshu, 390-8621, Japan

SO Resuscitation (2002), 52(1), 101-108
CODEN: RSUSBS; ISSN: 0300-9572

PB Elsevier Science Ireland Ltd.

DT Journal

LA English

OSC.G 2 THERE ARE 2 CAPLUS RECORDS THAT CITE THIS RECORD (2 CITINGS)

RE.CNT 27 THERE ARE 27 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L16 ANSWER 5 OF 14 HCAPLUS COPYRIGHT 2010 ACS on STN

TI Effects of high-molecular-weight cryoprotectants on platelets and the coagulation system

AB The objective of this study is to examine the effects of the most widely used high-mol.-weight cryoprotectants on the coagulation system. Dextran, hydroxyethyl starch (HES), polyvinyl pyrrolidone (PVP), polyethylene glycol (PEG), and albumin were added at different concns. in the range between 0.01-1% (w/v) to solvent/detergent-treated plasma. Using a STA/STA Compact coagulation analyzer the following clotting tests were performed: prothrombin time (PT), activated partial thromboplastin time (APTT), thrombin time (TT), Factor V, and Factor VIII percentage of activity. PVP and PEG caused a significant increase in APTT, a decrease

in Factor VIII percentage of activity, and a slight decrease in TT, while PT and Factor V percentage of activity remained unchanged. Dextran, HES, and albumin did not effect the clotting tests. The effect of high-mol.-weight cryoprotectants on platelets was assessed by platelet-induced clot retraction (PICR) and aggregation with thrombin and agglutination with ristocetin. Platelet aggregation and agglutination were unaffected by all cryoprotectants tested; however, PICR was significantly reduced in the presence of PVP or PEG. Possible mechanisms by which PVP and PEG interfere with the coagulation system are discussed. We also raise issues concerning the development of one-step blood cryopreservation techniques which do not require cryoprotectant removal prior to transfusion. (c) 2000 Academic Press.

AN 2000:533843 HCAPLUS <<LOGINID::20100503>>
DN 134:175168
TI Effects of high-molecular-weight cryoprotectants on platelets and the coagulation system
AU Bakaltcheva, Irina; Ganong, Jason P.; Holtz, Bonnie L.; Peat, Raquel A.; Reid, Thomas
CS Transfusion and Homeostasis Medicine, Walter Reed Army Institute of Research, Silver Spring, MD, 20910, USA
SO Cryobiology (2000), 40(4), 283-293
CODEN: CRYBAS; ISSN: 0011-2240
PB Academic Press
DT Journal
LA English
OSC.G 10 THERE ARE 10 CAPLUS RECORDS THAT CITE THIS RECORD (10 CITINGS)
RE.CNT 38 THERE ARE 38 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L16 ANSWER 6 OF 14 HCAPLUS COPYRIGHT 2010 ACS on STN
TI First human studies with a high-molecular-weight iron chelator
AB The release of free, reactive iron from cellular iron stores has been implicated as an important contributor to tissue damage in a variety of clin. situations, including ischemia and reperfusion injury, hemorrhagic shock, and burn injury. Deferoxamine mesylate (DFO), the only iron chelator currently approved for clin. use, is used for the treatment of iron overload, including acute iron poisoning and treatment of chronic iron overload in transfusion-dependent anemias such as β-thalassemia. However, it is not suitable for acute care situations because of its toxicity, primarily hypotension when given at high i.v. doses, and its short plasma half-life. We have produced a high-mol.-weight iron chelator by chemical coupling DFO to hydroxyethyl starch. This novel chelator (HES-DFO) was administered to healthy male subjects by i.v. infusion over a 4-h period. The drug was well tolerated, and signs of DFO acute toxicity were not observed Maximum plasma chelator levels of approx. 3 mmol/L were achieved with HES-DFO, which is more than an order of magnitude higher than has been reported with injections of DFO. Drug residence time in plasma was markedly prolonged, with an initial half-life of 22 to 33 h. Urinary iron excretion was 7.1 ± 2.2 mg in 48 h in the highest dose group, as compared with 0.06 ± 0.15 mg in control subjects who received normal saline infusions. I.v. infusion of HES-DFO is well tolerated, produces substantial and prolonged plasma chelator levels, and markedly stimulates urinary iron excretion.
AN 2000:430799 HCAPLUS <<LOGINID::20100503>>
DN 133:37931
TI First human studies with a high-molecular-weight iron chelator
AU Dragsten, Paul R.; Hallaway, Philip E.; Hanson, Gregory J.; Berger, Arthur E.; Bernard, Bruce; Hedlund, Bo E.
CS Biomedical Frontiers Inc, Minneapolis, MN, 55414, USA

SO Journal of Laboratory and Clinical Medicine (2000), 135(1), 57-65
CODEN: JLCMAK; ISSN: 0022-2143
PB Mosby, Inc.
DT Journal
LA English
OSC.G 23 THERE ARE 23 CAPLUS RECORDS THAT CITE THIS RECORD (23 CITINGS)
RE.CNT 55 THERE ARE 55 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L16 ANSWER 7 OF 14 HCAPLUS COPYRIGHT 2010 ACS on STN
TI Comparison of effects of low molecular weight starch (Pentastarch) and high molecular weight starch (Hetastarch) on RBC sedimentation and hematopoietic stem cell colony formation
AB In allogeneic bone marrow transplantation (BMT) in patients with ABO incompatibility, high mol. weight hydroxyethyl starch (Hetastarch, HS) sedimentation method has been used to prevent hemolytic reaction while collecting enough stem cells. Since HS is known to have many adverse reactions, low mol. weight starch (Pentastarch, PS) has been developed. To compare the effects of 6% HS, 6% PS and 10% PS on the RBC sedimentation we measured erythrocyte sedimentation rate (ESR), to evaluate the in vitro effects of PS and HS on the number of colony forming unit of granulocyte/monocyte (CFU-GM) and CFU-Mix colonies, we used 8 bone marrow aspirates and 2 buffy coats from 10 different donors. Also, we measured hematocrits and the number of RBC from supernatants. Finally, to evaluate the effect of different concns. of hydroxyethyl starch (HES) on colony formation, we measured the number of CFU-GM and CFU-Mix colonies of mononuclear cells isolated by Ficoll-Hypaque method at different concentration of HES. In 12 samples, whereas all HES increased the ESR, both 6% HS and 6% PS elevated ESR equally, but 10% PS markedly elevated ESR compared to other HES. In bone marrow aspirates and buffy coats from 10 different donors, there were no statistically significant differences between HS and PS groups for the number of CFU-GM and CFU-Mix colonies, hematocrits and the number of RBC($P>0.05$). Concns. of more than 5% PS and HS (volume/volume) suppressed formation of CFU-GM and CFU-Mix colonies. These data suggest that 10% PS is more effective than 6% HS in RBC sedimentation without affecting colony formation of hematopoietic stem cells. Therefore, 10% PS can replace 6% HS for RBC separation in ABO incompatible BMT.
AN 1998:391421 HCAPLUS <<LOGINID::20100503>>
DN 129:166109
OREF 129:33681a,33684a
TI Comparison of effects of low molecular weight starch (Pentastarch) and high molecular weight starch (Hetastarch) on RBC sedimentation and hematopoietic stem cell colony formation
AU Eom, Hyeon-Seok; Han, Chi-Wha; Cho, Seok-Goo; Jeong, Dae-Chul; Hong, Hee-Sun; Kim, Chun-Choo; Kim, Won-Il; Kim, Dong-Jip
CS Division of Hematology-Oncology, Department of Internal Medicine, College of Medicine, The Catholic University of Korea, S. Korea
SO Bulletin of the Catholic Research Institutes of Medical Science, Catholic University of Korea (1997), 25(1), 1-7
CODEN: BCRSFZ
PB Catholic University of Korea, Catholic Research Institutes of Medical Science
DT Journal
LA English
RE.CNT 33 THERE ARE 33 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L16 ANSWER 8 OF 14 HCAPLUS COPYRIGHT 2010 ACS on STN
TI High molecular weight forms of deferoxamine:

novel therapeutic agents for treatment of iron-mediated tissue injury
AB The use of novel high mol. weight forms of conjugated-deferoxamine (DFO) (i.e., dextran-DFO and hydroxyethylstarch-DFO conjugates) in the treatment of exptl. acute iron poisoning is reported.
AN 1991:422150 HCAPLUS <<LOGINID::20100503>>
DN 115:22150
OREF 115:3757a,3760a
TI High molecular weight forms of deferoxamine: novel therapeutic agents for treatment of iron-mediated tissue injury
AU Hedlund, Bo E.; Hallaway, Philip E.; Mahoney, John R.
CS Biomed. Frontiers, Inc., Minneapolis, MN, USA
SO Advances in Experimental Medicine and Biology (1990), 264(Antioxid. Ther. Prev. Med.), 229-34
CODEN: AEMBAP; ISSN: 0065-2598
DT Journal
LA English

L16 ANSWER 9 OF 14 HCAPLUS COPYRIGHT 2010 ACS on STN
TI Alternate dosage regimens for high-molecular-weight hydroxyethyl starch
AB Six percent high-mol.-weight hydroxyethyl starch (HES) [9005-27-0] was used in the standard 500-mL dose and in various decreased doses to assess the efficacy of alternate dosage regimens for granulocyte procurement. When used in full strength, yields of 0.57 + 1010/L of blood processed (LBP) were obtained. When HES was used in only the first 2 passes, the subsequent 3 passes with acid-citrate-dextrose, decreased the yield to 0.14 + 1010/LBP. Reversing this procedure gave yields of 0.06 + 1010/LBP (without HES) and 0.49 + 1010/LBP when HES was added during the next 2 passes. When the HES dose was decreased to 1/2 strength on the 2nd consecutive day of leukacytapheresis, the granulocyte yields were decreased from 0.57 + 1010/LBP to 0.42 + 1010/LBP. Use of 1/2 strength HES on 1st-time donors gave yields of only 0.35 + 1010/LBP. Infusion of the entire 500 mL doses of HES 1/2 h prior to the procedure produced low yields of 0.20 + 1010/LBP, indicating that HES must be present during the centrifugation and separation procedure in order to enhance yields. Thus, alternate dosage regimens of this form of HES are not advisable and that optimal yields are produced when 500 mL of the 6% solution is used during the collection procedure.
AN 1986:74866 HCAPLUS <<LOGINID::20100503>>
DN 104:74866
OREF 104:11851a,11854a
TI Alternate dosage regimens for high-molecular-weight hydroxyethyl starch
AU Rock, G.; McCombie, N.
CS Ottawa Cent., Can. Red Cross Blood Transfus. Serv., Ottawa, ON, K1S 3E2, Can.
SO Transfusion (Malden, MA, United States) (1985), 25(5), 417-19
CODEN: TRANAT; ISSN: 0041-1132
DT Journal
LA English

L16 ANSWER 10 OF 14 HCAPLUS COPYRIGHT 2010 ACS on STN
TI Pharmacokinetics of high molecular weight hydroxyethyl starch in dogs
AB The elimination of high-mol.-weight hydroxyethyl starch (Hespan) (HMW-HES) [9005-27-0] was determined in dogs. Dogs were divided into 2 groups, one of which was bled 25 mL/kg. Both groups were given 25 mL of 6% HMW-HES solution/kg over 30 min. There was no significant difference in plasma concentration-vs-time profiles between the 2 groups. The biol. half-life averaged 7.5 and 8.4 days in control and bled dogs, resp. The renal clearance of HMW-HES diminished

considerably in both groups during a 7-day period. Despite large interanimal variations in renal clearance, there was no significant difference between the groups.
AN 1982:520017 HCAPLUS <<LOGINID::20100503>>
DN 97:120017
OREF 97:19753a,19756a
TI Pharmacokinetics of high molecular weight hydroxyethyl starch in dogs
AU Yacobi, Avraham; Gibson, Thomas P.; McEntegart, Carol M.; Hulse, James D.
CS Dep. Res. Dev., Am. Crit. Care, McGaw Park, IL, 60085, USA
SO Research Communications in Chemical Pathology and Pharmacology (1982), 36(2), 199-204
CODEN: RCOCB8; ISSN: 0034-5164
DT Journal
LA English
OSC.G 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (1 CITINGS)

L16 ANSWER 11 OF 14 HCAPLUS COPYRIGHT 2010 ACS on STN
TI Elimination of high molecular weight hydroxyethylstarch in rats
AB The elimination of high mol. weight hydroxyethylstarch (HMW -HES) [9005-27-0] was studied in rats. Ten animals received a single i.v. dose of 0.9 g/kg HMW-HES, labeled with 14C on the hydroxyethyl group. Twenty eight days later, 74.1 and 10.9% of the administered radioactivity had been excreted in the urine and feces, resp. The urinary excretion rate of radioactivity declined triexponentially with a terminal half-life of 18.7 days. The rats were divided into 3 groups and were sacrificed after 8, 18, and 28 days. Following administration of the compound, the total radioactivity in organs and the carcass was determined There was a gradual decrease in overall radioactivity remaining in the body. Among different organs examined, the radioactivity in the spleen appeared to increase gradually which is in contrast to the decrease in the other organs. After 28 days, approx. 12.5% of the dose remained in the carcass and 1.9 and 1.7% were in the liver and spleen, resp. The results of this study showed that all of the administered radioactivity could be accounted for following the administration of HMW-14C-HES.
AN 1980:542613 HCAPLUS <<LOGINID::20100503>>
DN 93:142613
OREF 93:22543a,22546a
TI Elimination of high molecular weight hydroxyethylstarch in rats
AU Hulse, James D.; Stoll, Roger G.; Yacobi, Avraham; Gupta, Surinder D.; Lai, Chii-Ming
CS Dep. Res. Dev., American Critical Care, McGaw Park, IL, 60085, USA
SO Research Communications in Chemical Pathology and Pharmacology (1980), 29(1), 149-58
CODEN: RCOCB8; ISSN: 0034-5164
DT Journal
LA English

L16 ANSWER 12 OF 14 HCAPLUS COPYRIGHT 2010 ACS on STN
TI Changes in the molecular composition of circulating hydroxyethyl starch following consecutive daily infusions in man
AB The hydroxyethyl starch (HES) [9005-27-0] recovered from the intravascular space 10 min following the injection into volunteers on days 1, 2 and 3, was of a narrower mol. size distribution than the injected material, with a noticeable shift to mols. of a low mol. weight (LMW) size. The HES in the sampled plasma 24 h postinjection on days 1, 2 and 3 consisted of mols. possessing a LMW distribution, concomitantly with a slight shift to mols. of a larger mol. size. The HES recovered from the bloodstream 480 h after the 3rd and final injection consisted of

mols. possessing an intermediate size distribution, between LMW and high mol. weight (HMW) size material. Apparently, large HES mols. contained in the injected material are eliminated from the bloodstream; the HMW fraction at least partially by α-amylase mediated catabolism, and the resulting LMW fraction by excretion.
AN 1979:468263 HCAPLUS <<LOGINID::20100503>>
DN 91:68263
OREF 91:10905a,10908a
TI Changes in the molecular composition of circulating hydroxyethyl starch following consecutive daily infusions in man
AU Mishler, J. M.; Ricketts, C. R.; Parkhouse, E. J.
CS Lab. Tumorimmunol., Med. Universitaetsklin. Koeln, Cologne, 5/41, Fed. Rep. Ger.
SO British Journal of Clinical Pharmacology (1979), 7(5), 505-9
CODEN: BCPHBM; ISSN: 0306-5251
DT Journal
LA English

L16 ANSWER 13 OF 14 HCAPLUS COPYRIGHT 2010 ACS on STN
TI The formation of high-molecular-weight complexes from serum amylase and colloidal plasma substitutes
AB The distribution of mol. wts. of human blood serum amylase was studied by gel filtration of serum, obtained before and after infusion of the colloidal plasma substitutes, hydroxyethyl starch, dextran, and gelatin, resp. Both in serum, drawn after i.v. infusion of hydroxyethyl starch, and in a solution of hydroxyethyl starch with serum, a significant increase in the mol. weight of serum amylase was observed The occurrence of this macroamylase may be explained by the formation of aggregates between hydroxyethyl starch and amylase. Because of its high mol. weight, the elimination of this enzyme-substrate-complex is retarded, thus leading to the observed increase of serum amylase activity. In contrast to these observations concerning hydroxyethyl starch, no change in the apparent mol. weight of serum amylase was observed following the infusion of either gelatin or dextran or their solns. with serum.
AN 1978:33755 HCAPLUS <<LOGINID::20100503>>
DN 88:33755
OREF 88:5303a,5306a
TI The formation of high-molecular-weight complexes from serum amylase and colloidal plasma substitutes
AU Koehler, Hans; Kirch, W.; Horstmann, H. J.
CS I. Med. Klin. Poliklin., Johannes Gutenberg-Univ., Mainz, Fed. Rep. Ger.
SO Anaesthesist (1977), 26(11), 623-7
CODEN: ANATAE; ISSN: 0003-2417
DT Journal
LA German

L16 ANSWER 14 OF 14 HCAPLUS COPYRIGHT 2010 ACS on STN
TI Replacement of plasma by high molecular weight substances
AB A review with 27 references. The requirements for colloidal plasma substitutes, the physicochem. characterization of synthetic colloids, the historical development of plasma substitutes, and a number of specific polymers in use, including dextrans, gelatins, poly(vinylpyrrolidone) and hydroxyethyl starch, are discussed.
AN 1969:6522 HCAPLUS <<LOGINID::20100503>>
DN 70:6522
OREF 70:1251a,1254a
TI Replacement of plasma by high molecular weight substances
AU Appel, Walter; Biekert, E.

CS Forschungsinst. Fa. Knoll A.-G., Ludwigshafen/Rhein, Fed. Rep. Ger.
SO Angewandte Chemie, International Edition in English (1968), 7(9), 702-8
CODEN: ACIEAY; ISSN: 0570-0833
DT Journal; General Review
LA English